

by Aravind Samaj Foundation Chennai and e



Of Health Of Psychology

Public Domain. Gurukul Kangri Collection,

S-4

06

Journal of Indian **Health Psychology**

Vol. 8, 9, 12

2014, 17

No. 2, 1, 1

Journal of Indian Health Psychology (JIHP) is a biannual refereed Journal devoted to interdisciplinary research with the objective of furthering an understanding of the scientific relationship between behavioural principles on one hand and health issues on the other. The Journal provides a forum to integrate the theoretical, empirical and application based knowledge in this area. The distinctive feature of the journal is to include a special section of the articles based on Indian perspectives of health psychology and behaviour. Dissemination of the knowledge among the professional and upcoming researchers will go a long way in benefitting the masses at large. Research carried out at individual, group and community level are welcome.

EDITORS

Prof. Rajbir Singh
Department of Psychology
M.D. University, Rohtak
Mob: 9416380748

Prof. NavRattan Sharma
Department of Psychology
M.D. University, Rohtak
Mob: 9355612805

MANAGING EDITOR

Dr. Deepti Hooda
Dept. of Psychology
M.D. University, Rohtak
Mob-9416740136

BOARD OF CONSULTING EDITORS

Prof. A.K. Srivastava
Deptt. of Psychology
Banaras Hindu University,
Varanasi-221005

Prof. Amrita Yadava
Deptt. of Psychology
M.D. University,
Rohtak-124001

Prof. Girishwar Misra
Deptt. of Psychology
University of Delhi,
Delhi-110007

Prof. G.P. Thakur
12, Qutabview Apartment
Shaheed Jeet Singh Marg,
Delhi-110007

Prof. Jayanti Basu
Deptt. of Applied Psychology
University of Calcutta,
Kolkata-700009

Prof. Manas K. Mandal
Defence Institute of
Psychological Research
Timarpur, Delhi-110054

Prof. Meena Hariharan
Centre for Health Psychology
Central University of Hyderabad
Hyderabad, (A.P.)-500046

Prof. Sagar Sharma
House No. 564,
Sector-36B
Chandigarh-160036

Prof. Shikha Dixit
Deptt. of Humanities and
Social Sciences
I.I.T. Kanpur (U.P.)-208016

Prof. Urmi Nanda Biswas
Deptt. of Psychology
The M.S. University, Baroda,
Vadodara-390002

The views expressed in this journal are of the writers and may not necessarily reflect those of the editors and editorial board.

The territorial jurisdiction for all the disputes shall be of Delhi.

Printed
Daryagan
at: G.S.

Journal of Indian **Health Psychology**

VOL. 8, NO. 2, March, 2014

Editors

Prof. Rajbir Singh

Prof. NovRattan Sharma

Central Library
Gurukul Kangri University
Haridwar-249404 (U.A.)



Printed & Published by Dr. N.K. Singh, F-4, 'Hari Sadan', 20, Ansari
Daryaganj, New Delhi-110002

at: G.S. Offset, Naveen Shahdara, Delhi-110032.

CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

JHP

Journal of Indian Health Psychology

Journal of Indian Health Psychology is a biannual Journal devoted to interdisciplinary research publication with the objective of furthering an understanding of scientific relationships between behavioural principles on one hand and health issues on the other. This journal shall provide a forum to integrate the theoretical, empirical and application based knowledge in this area. The distinctive feature of the journal will be to include a special section of the articles based on Indian perspectives of health psychology and behaviour. Dissemination of the knowledge among the professionals and upcoming researchers will go a long way in benefiting the masses at large. Research carried out at individual, group and community level are welcome.

**To enter your subscription for outstanding biannual research journal
Journal of Indian Health Psychology**

Please fill out and return the Order Form below (or a copy there of)

SUBSCRIPTION ORDER FORM

Please enter my subscription to **Journal of Indian Health Psychology**

Volume.....

No.

Year.....

SUBSCRIPTION RATES

	Print Price			Online Price			Online + Print Price		
	Rs.	\$(US)	•	Rs.	\$(US)	•	Rs.	\$(US)	•
Annual	1500	200	150	2200	250	200	3000	400	200
Five Years	6500	800	450	9500	1000	500	15000	2000	1000
Life Members	50000	4000	3000	75000	5000	4000	125000	10000	8000

I enclosed a cheque/DD/MO/of Rs./\$/• cheque/DD No.....

made payable to the **Global Vision Publishing House**.

(Please add Rs. 100 for outstation cheques)

Name/Inst:

Address:

Tel. No. email

Signature

NOTE:

1. Kindly issue Cheques/Draft/MO drawn in favour of **Global Vision Publishing House** and payable at Delhi.
2. All subscription will be processed only against advance payment.

GLOBAL VISION PUBLISHING HOUSE

F-4, 1st Floor, 'Hari Sadan', 20, Ansari Road, Daryaganj,
New Delhi-110002 (INDIA)

Tel.: Tel.: 23261581, 23276291, Mob: 9810644769

Email: editorial@globalvisionpub.com; info@globalvisionpub.com

Website: www.globalvisionpub.com

EDITORIAL

The Journal of Indian Health Psychology (JIHP) aims to publish interdisciplinary researches that generate knowledge on health issues and their solutions with special focus on Indian data. Present issue includes eleven research articles and two book reviews.

First article contributed by A.P. Singh and Nitu Singh explored the role of locus of control as a moderator between the relationship of negative life events stress and general health. Authors have reported that locus of control moderated the relationship between negative stress events related to job and general health. The second article assessed and compared the family burden among the parents of children with mental retardation and healthy children. Parents of children with mental retardation showed significant higher level of burden than healthy control group. Therefore, authors have tried to shift the focus of mental health professionals to mental health issues of care givers along with that of individuals with MR. The next article enlisted in the current issue studied Psychological distress among people living with HIV/AIDS and highlights the need for social and cognitive skills training to patients to facilitate them in handling their distress by rational thinking, worry control and planned positive living in addition to the medical intervention.

Kamlesh Singh, Jasleen Kaur, Dalbir Singh and Shradha Suri examined the relationship between different Well-being and Interpersonal (altruism, gratitude, forgiveness, avoidance motivation and revenge motivation) and Intrapersonal factors (self-esteem, resilience, and self-management) among rural women. The next article explored the relationship between Coping behaviour, Psychosocial stressors and Life satisfaction among army personnel of officer ranks and other ranks. Mansavee Dubey and G. S. Gujar identified the Psychological Predictors of Mental Health government and private school teachers. They have reported Emotional Intelligence as a significant positive predictor whereas Presumptive Life Stress was a significant negative predictor of dimensions of Mental Health. Samyak Makwana compared Self-concept of students who participate in Sport with non-participating Students. Author observed students who participated in sports had better physical and social self-concept than non-participating group.

(iv)

Vandana Singh and Pramthesh Pandey studied blame attribution and severity of punishment in the case of sexual molestation of women. The finding of this research emphasis the need to design intervention directed at reducing cases of eve teasing and sexual molestation and can also help in developing reform policies. The next article by O. P. Sharma, S. Bhardwas and H. Tiwari reported that type of Pranayama and regularity of practice have significant effect on Positive Self-evaluation dimension of General Mental Health. Anis Ahmad and Gauri Shankar Singh conducted the research to assess and understand the relationship between Life satisfaction and Mental health of aged male and female of North Bihar. InduBala and Amrita Yadava have empirically demonstrated that intra-individual variability (IIV) in RT does not appear to be a very good index whereas visual complex RT is a good index of neuropsychological dysfunctioning.

Editors are grateful to all the investigators/authors, referees and book reviewers for their valuable inputs. We seek the feedback from their readers in order to further enrich the journal.

Editors

CONTENTS

<i>Editorial</i>	(iii)
1. Role of Locus of Control as a Moderator between the Relationship of Negative Life Event Stress and General Health of Managerial Personnel <i>A.P. Singh and Nitu Singh</i>	1
2. Study of Burden in Parents of Children with Mental Retardation <i>Kuldeep Singh, Raj Kumar, NovRattan Sharma and Dharmender Kumar Nehra</i>	13
3. Psychological Distress among People Living with HIV/AIDS <i>Pooja Pandey and Archana Shukla</i>	21
4. Correlates of Well-Being: A Rural Women Study <i>Kamlesh Singh, Jasleen Kaur, Dalbir Singh and Shradha Suri</i>	31
5. Coping Behaviour among Army Personnel <i>Shivalika Sharma, Anup Sud and Gayatri Raina</i>	43
6. Psychological Predictors of Mental Health of School Teachers <i>Mansavee Dubey and G. S. Gujar</i>	51
7. Impact of Sports Participation on Self-Concept of Higher Secondary Students <i>Samyak Makwana</i>	71
8. Sexual Molestation of Women: Blame Attribution and Severity of Punishment <i>Vandana Singh and Pramthesh Pandey</i>	81
9. Impact of Pranayama on Positive Self-evaluation Dimension of General Mental Health amongst Regular and Casual Practitioners <i>O. P. Sharma, S. Bhardwas and H. Tiwari</i>	91

10. Life Satisfaction and Mental Health of Aged with Reference to North Bihar	101
<i>Anis Ahmad and Gauri Shankar Singh</i>	
11. Comparison of Mean and Intra-Individual Variability Scores on Reaction Time as Indices of Neuropsychological Dysfunction	113
<i>Indu Bala and Amrita Yadava</i>	

Book Reviews

• Personality Enhancement	121
<i>Sonia Malik</i>	
• Basics of Guidance and Counseling	125
<i>Shalini Singh</i>	

ROLE OF LOCUS OF CONTROL AS A MODERATOR
BETWEEN THE RELATIONSHIP OF NEGATIVE
LIFE EVENT STRESS AND GENERAL HEALTH OF
MANAGERIAL PERSONNEL

A.P. Singh * and Nitu Singh**

ABSTRACT

This paper is an attempt to find out the role of locus of control as a moderator between the relationship of negative life events stress and general health. With the growth of science, technology and materialistic predominance, individual's concern for health has increased. The present study was conducted on 210 managerial personnel of different private sector organizations in India. The moderator regression analysis indicated that locus of control moderated the relationship between job negative and general health. This study may help managers and human resource development practitioners to understand negative life events stress and the importance of personal control in order to maintain their health to work efficiently in organizations.

Keywords: Stress, Locus of Control, Emotional wellbeing and General Health

INTRODUCTION

People use the word "stress" to describe a wide variety of situations – from your cell phone ringing while you're talking on another phone – to the feelings associated with intense work overload, or the death of a loved-one. The changing world of work and its implications, as well as the demand on organisations for better performance and competitiveness is taking its toll on the emotional wellbeing

* Professor, Dept. of Psychology, Faculty of Social Science, B.H U, Varanasi-221005. Email: apsbhu@gmail.com

** Research Scholar, Dept. of Psychology, Faculty of Social Science, B.H U, Varanasi-221005. Email: jia.neetu@gmail.com

of employees. Being mentally and emotionally healthy does not preclude the experiences of life which we cannot control. As humans we are going to face emotions and events that are a part of life. According to Smith and Segal (2011), "People who are emotionally and mentally healthy have the tools for coping with difficult situations and maintaining a positive outlook in which they also remain focused, flexible, and creative in bad times as well as good". In order to improve one's emotional mental health, the root of the issue has to be resolved.

Stress is a condition or feeling experienced when a person perceives that "demands exceed the personal and social resources the individual is able to mobilize." In less formal terms, we feel stressed when we feel that "things are out of control." Our ability to cope with the demands upon us is the key to our experience of stress. For example, starting a new job might be a wholly exciting experience if everything else in your life is stable and positive. But if you start a new job when you've just moved into a new house, or your partner is ill, or you're experiencing money problems, you might find it very hard to cope. All individuals in the course of living, experience a variety of stressful life events, which might include such diverse events as death of one's spouse, separation or divorce, addition to the family, illness of a family member and transfer to an undesirable location. These events are stressful because they often require significant social readjustments and adaptations.

Stressful life events can affect the individual's working in the organization. Holmes and Rahe (1970) have concluded that many illnesses can be precipitated by the stress accompanying changes negative and positive in one's life. Extra organizational stressors interact between life outside and life inside the organization which might put pressures on managers. Life stress refers to the psychological response state of disturbed affect in relation to stressors in one's life as a whole (Parasuram, Greenhaus & Granrose, 1992). Exposure to chronic stressors (such as relationship and family problems, financial stress and job strain) in addition to negative life events has also been linked with psychological distress or disorder, including depression. Environmental demands includes acute life events, chronic strains and daily hassles, all of which can elicit a stress response, suggesting that it is not just dramatic events but also the events of daily life that can exact a toll on health (Thoits 1995). Numerous studies have shown that exposure to intense and ostensibly stressful life events is associated with higher level of psychological problems including psychological distress, psychiatric disorders, substance abuse and suicide (Dohrenwend 2000; Turner and Lloyd 1999).

The concept of locus of control was first proposed by Rotter (1954), which originally it was locus of control of reinforcement. Locus of control is defined as the general belief that individual's successes, failures and outcomes are control by individual's actions and behaviours (internal); or perhaps, people's achievements,

failures and outcomes are controlled by other forces like chance, luck and fate (external) (Spector, 1988). Many studies have been done to explain the locus of control in both aspects internal and external control; in fact, control is an important factor for well-being (Meier, Semmer, Elfering, & Jacobshagen, 2008). So, locus of control is divided into internal and external control.

Internal locus of control refers to people who believe that outcomes and their successes and failures are the result of their own actions and efforts (Rotter, 1966). It can be defined as the events and outcomes which can be influenced by people's own beliefs and actions (Ng, Sorensen, & Eby, 2006). Similarly, individuals with internal locus of control believe that they are able to control and manage their own lives by making decisions about the events (James & Wright, 1993). Additionally, Hsu (2011) found that individuals with high internal locus of control accept that their achievements and failures depend on their own efforts and endeavours or briefly they have ability to determine their own outcomes and they are responsible for what happened.

External locus of control refers to the beliefs that chance, fate, managers, supervisors, organizations and other persons are more powerful to make decision about individual's lives and outcomes (Rotter, 1966). Indeed people with perceived external locus of control believe that fate, chance, and luck, friends, and managers determine the outcomes which they themselves experience; so, they contribute their successes, failures and outcomes to external sources (James & Wright, 1993). Hsu (2011) proposed that people with external locus of control believe that external elements such as luck, chance and destiny are stronger to determine their lives, and their failures or successes are not due to their own efforts.

In humans, it is the general condition of a person's mind and body, usually meaning to be free from illness, injury or pain (as in "good health" or "healthy"). The World Health Organization defines mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community". It was previously stated that there was no one "official" definition of mental health. Cultural differences, subjective assessments, and competing professional theories all affect how "mental health" is defined. Mental health can be seen as an unstable continuum, where an individual's mental health may have many different possible values.

Mental wellness is generally viewed as a positive attribute, such that a person can reach enhanced levels of mental health, even if the person does not have any diagnosed mental health condition. This definition of mental health highlights emotional well-being, the capacity to live a full and creative life, and the flexibility to deal with life's inevitable challenges. Many therapeutic systems and self-help books offer methods and philosophies espousing strategies and techniques vaunted

as effective for further improving the mental wellness of otherwise healthy people. Positive psychology is increasingly prominent in mental health.

A mental health problem can be a short term reaction to stressor(such as a loss, painful event, illness, medication, etc.) .If situation does not abate or if symptoms of distress are interfering with other aspects of life, assistance from a mental health professional may be needed .We do not generally avoid getting help for physical problem(such as having broken bone set by an orthopaedist, or a cavity filled by a dentist).Yet some believe it is shameful to seek help for an emotional health problem, or think that an emotional problem means you are "crazy". In many situations, the sooner help is sought; the less ongoing difficulty here will be the problem.

Health is one of the many areas in which there has been a significant amount of interest in relating locus of control (LOC) beliefs to a variety of relevant behaviours. There is initial evidence of the relationship between Locus of Control and health related behaviours. Health-specific Locus of Control beliefs will increase understanding of health behaviours. (Wallston & Wallston, 1978).

Research into job stress and its relationship to locus of control support the existence of a relationship. (Eves. et.al., 2000, Spector & O'Connell, 1994). All these studies found that externals seem not only to have higher perceived level of stress than internals but also appear to be more negatively affected. The literature concerning research on the relationship between locus of control and health facilitating behaviours as a whole, point towards internal locus of control as a mediating factor of actions taken to prevent health problems. (Lefcourt & Davidson-Katz, 1991, Carlisle Frank, 1991). Another research shows a predictive relationship between what has been called "life stress" "emotional stress" and "object loss" and the onset of both psychological disturbances and physical illness (Dohrenwend & Dohrenwend, 1974; Gunderson& Rahe, 1974).

There is growing empirical evidence that exposure to stress and resulting stress reactions are linked with a variety of deleterious health effects (Dohrenwend 2000; Kelly, Hertzman, & Daniels 1997). Increased levels of stress and negative life events posited to be important not only as determinants of health, but also as mechanisms by which socioeconomic inequalities in physical (Baum, Garofalo, & Yali 1999) and mental (Turner, & Avison 2003) health are produced.

Although stressful life events are associated with psychological symptoms in adults and children, research indicates that life stress accounts for a small percentage of the variance in predicting the onset of psychological symptoms (Goodman, Gravitt, & Kaslow, 1995). Moreover, many individuals who experience high levels of negative life stress do not become disturbed (Kaplan, Sallis, & Patterson, 1993). In light of the significant but low relationship between stress and symptoms, researchers have shifted their focus to the search for psychosocial

mediators and moderators of this association, such as social support (Cohen & Wills, 1985; Nadia & Rene, 1996), coping skills (Windle & Windle, 1996), cognitive appraisal processes (Lazarus & Folkman, 1984), social problem solving (Goodman et al., 1995), and locus of control (Kliwer & Sandler, 1992;). In general terms, a moderator affects the nature and magnitude of relations between life stress and psychological symptoms, Locus of control is the personal characteristic that has shown the most consistent evidence of a stress-moderating effect in studies (Cauce, Hannan, & Sargeant, 1992; Luthar, 1991).

Objective

The purpose of the present study was to examine locus of control as a moderator between negative life event stress and general health of managerial personnel.

Hypothesis

From the literature and empirical studies concerning the role of negative life event stress, and general health, the following hypothesis is proposed:

1. Locus of control would moderate the relationship between negative life event stress and general health.

METHOD

Sample

Present investigation was conducted on 210 managerial personnel (top, middle and front) of different private sector organization in India. Participants age varied between 22 to 59 years.

Design

In the present investigation we have used a correlational design with ex-post facto research. Negative life events stress and Locus of control were taken as predictor variable while General Health was considered as criterion variable.

Tools

The following psychometric devices along with personal data schedule which recorded the information regarding age, sex, marital level were employed.

1. *Life Changes Experiences Survey* (Dohrenwend et al., 1978): Stress (life events) was measured by using Life Changes Experiences Survey. This questionnaire has been frequently used in studies to measure life event stress. Internal consistency reliabilities (Cronbach's Alpha) of different sub scales were found to be 0.53 for job positive stress, 0.73 for positive personal life stress, and 0.77 for total positive life stress. High score on this scale shows high level of life events stress.

2. *Social Reaction Inventory (Rotter, 1966)*: Locus of control was assessed by using Social Reaction Inventory. This Inventory was developed to measure person's internal external locus of control by Rotter (1966) and based upon his identification of the construct which deals with a person's perception of contingency relationship between his own behaviour and events which follow that behaviour. The inventory consists of 23 question pairs, using a forced choice format, plus six filler questions. Internal statements are paired with external statements. Internal consistency coefficient (Kuder-Richardson) of this inventory was found to be 0.70 (Rotter, 1966). For discriminant validity, Rotter has reported that correlation with the Marlowe-Crowne social desirability scale range from -0.70 to -0.35. High score on this scale shows external locus of control and low score shows internal locus of control.
3. *General Health Questionnaire-12 version (Goldberg, 1972)*: This scale was developed by Goldberg, (1972) to measure the health status of individual. In this scale, items are rated on the basis of relationship of perceived health in present and last two weeks before. Split-half reliability of this scale was found to be 0.83. This scale was developed to screen out the psychiatric patient from general population. In present study this questionnaire was used to assess the level of general health of managerial personnel. High score on this scale shows good health.

Procedure

For conducting the present study, all the necessary permission for data collection was taken from the organizations, selected for the study. Rapport was established with the employees and the purpose of the study was explained to them. The questionnaire was distributed to 210 managers who were contacted personally and requested to respond on the above mentioned measures. They were asked to read carefully the instructions given in the questionnaires. Participants were allowed to take their own time to complete the questionnaire. All above mentioned psychometric devices were simultaneously administered to the selected participants. Scoring for all the above mentioned questionnaires were done accordingly as instructed in their manuals.

Data Analysis

The obtained raw scores on different scales were entered in computer. To study locus of control as a moderator between the relationship of negative life event stress and general health, moderator regression analysis was computed.

RESULTS AND DISCUSSION

In this paper, results have been computed in terms of moderated regression analysis by using SPSS. The scores for analysis were obtained on the basis of

response of managers on standardized measures- Life Changes Experience Survey, Social Reaction Inventory, and General Health Questionnaire-12 version.

Table 1: Summary of the results of Moderated Regression analysis for locus of control as a moderator between the relationship of job negative and general health

<i>Model</i>	<i>R</i>	<i>R.Sq</i>	<i>Adjusted R</i>	<i>R.sq Change</i>	<i>F</i>	<i>Sig.</i>
Job Negative(job neg)	0.133	0.018	0.013	0.018	3.754	0.054
Locus of control(LOC)	0.171	0.029	0.020	0.011	3.106	0.047
Job neg x LOC	0.206	0.042	0.029	0.013	3.046	0.030*

*Significant at 0.05 level

Table-1 records the result of Locus of control as moderator in the relationship between job negative and general health. Results indicate that locus of control is found to be the significant important moderator between the relationship of job negative and general health.

A number of studies have identified several factors that act as moderator against the deleterious effects of stress. These studies indicate that some personality characteristics may prevent work related tension from becoming stress-related health problems. Locus of control as a personality trait has shown the most consistent evidence of stress moderating effect (Cohen & Edwards, 1989; Kliewer & Sandler, 1992; Bono & Judge, 2003). Thus, various theoretical and empirical researches have provided the base for the present study which attempted to investigate the role of locus of control as a moderator in the relationship between negative life event stress and general health of managerial personnel.

The results of the present study revealed that Locus of control was found to be the significant moderator in the relationship between job negative and general health, which supports our proposed hypothesis.

Extreme stressors can create both acute and prolonged psychological distress and bodily ailments. As per an Insurance Company report (1992), problems at work are more strongly associated with health complaints than are any other life stressor- more than even financial problems or family problems. Rise in negative job events like problems or arguments with supervisor or colleagues, harassment, discrimination, work load, conflict between job demands etc can take a toll on health. Therefore, Locus of control may act as a buffer which is likely to alleviate the impact of negative job events on the general health of managers.

The findings of the present study throw light on the importance of individual differences. A situation which may be stressful for one person may not be so to

others. This is so because, the severity of stress depends on the individual's senses of control in dealing with them, as it shapes an individual's perception of what are the main causes of events in life. Locus of control has a close relationship with one's self-worth. So, locus of control may predispose one to have an ongoing evaluation of self-worth, which may allow people to adjust their perceptions of control in life that in turn relate to how one approaches situations. Thus, locus of control serves as a protective function by affecting appraisals of stressful situation, coping efforts or both.

Previous researches reported that individuals with high on internal locus of control are more powerful to overcome stress and its negative impacts. This is so because individuals with high internal locus of control can determine the outcomes of actions by their own decision making (Owen, 2006). Therefore, a person with high locus of control (internal) may view the situation to be controllable, predictable and thus would engage more actively and vigorously in coping with work stress, and manage to remain healthy.

Hence, it can be concluded that employees should increase their sense of control by making balance between the determined demands and their capabilities at workplace so as to prevent stress, which in turn may help in reducing its impact on health.

It is well known that stress is the cause of many psychological and physiological diseases, so employers have to make an effort to reduce the stress which is felt by the employees in the organizations. The result of the present study can motivate organizations to explore personality variables present in the managers that can help reduce and/or prevent stress observed by them in the workplace, thereby working to maintain the health and wellbeing. The present study can help in the stress management workshops too. The results indicate the necessity of employing counsellors in the organization. This service may help the employees deal and solve their personal problems, increase their locus of control which in turn may help them cope with the upcoming job demands.

Locus of control and negative life events stress has important influence on the general health of the employees working in the organizations. In future there is a need to study other personality variables which may help in reducing influence of stress on the general health. The present study was carried out only on the managers but there is also the need to include employees from different levels of an organization as samples. The levels of perceived work stress and work adjustment between internals and externals can also be explored. This study could only cover the private sector organizations but in future a comparative study between private and public sector organization can also be done.

REFERENCES

- Baum, Andrew, J.P. Garofalo, & Ann Marie Yali. (1999). Socioeconomic Status and Chronic Stress: Does Stress Account for SES Effects on Health? *Annals of New York Academy of Sciences*, 896: 131-44.
- Bickford, Melanie (2005). *Stress in the Workplace: A General Overview of the Causes, the Effects, and the Solutions*.
- Bono, J.E., & Judge, T. A. (2003). Core self-evaluations: A review of the trait and its role in job satisfaction and job performance. *European Journal of Personality*, 17: 5-18.
- Bush, B.A. (1999). Major life events as risk factors for post-stroke depression. *Brain Injury*, 13(2), 131-37.
- Carlisle- Frank, P. (1991). Examining Personal Control Beliefs as a Mediating Variable and The Health Damaging Behavior of Substance Abuse: An Alternative Approach. *The Journal of Psychology*, 125: 381-397
- Cohen, S., & Edwards, J.R. (1989). Personality characteristics as moderators of the relationship between stress and disorder. In R.W.J. Neufeld (Ed.), *Advances in the investigation of psychological stress* (pp. 235-283). New York: Wiley.
- Cohen, S., & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98: 310-357.
- Dohrenwebd, B.S., Krasnoff, L. Askenasy, A.R. & Dohrenwend, B.P. (1978). Exemplification of method for scaling life events: The PERI life event scale. *Journal of Health and Social Behaviour*, 19: 205-229.
- Dohrenwend, B.P. (2000). The Role of Adversity and Stress in Psychopathology: Some evidence and its implications for theory and research. *Journal of Health & Social Behaviour*, 41: 1-19.
- Dohrenwend, B.S. & Dohrenwend, B.P. (eds) (1974). *Stressful Life Events: Their Nature & Effects*. New York: Wiley Publications.
- Evers, A., Frese, M., & Cooper, C. L. (2000). Revisions and further developments of the occupational stress indicator: LISREL results from four Dutch studies. *Journal of Occupational and Organizational Psychology*, 73: 221-140.
- Goldberg, D.P. (1972). The Detection of Psychiatric Illness by Questionnaire. *Maudsley Monograph No.21*. Oxford: Oxford University Press.
- Goodman, S.H., Gravitt, G.W., & Kaslow, N.J. (1995). Social problem solving: A moderator of the relation between negative life stress and depression symptoms in children. *Journal of Abnormal Child Psychology*, 23: 473-485.
- Gunderson, E.K.E. & Rahe, R.H. (1974). *Life Stress and Illness*.
- Holmes, T.H. & R.H. Rahe (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11: 213-18.
- Hsu, Y.R. (2011). Work-family conflict and job satisfaction in stressful working environments: The moderating roles of perceived supervisor support and internal locus of control. *International Journal of Manpower*, 32 (2): 233-248.
- James A., & Wright, P. (1993). Perceived locus of control: occupational stress in the ambulance service. *Journal of Managerial Psychology*, 8 (5): 3-8.
- Kaplan, R.M., Sallis, J.F., & Patterson, J.L. (1993). *Health and human behavior*. New York: McGraw-Hill.

- Kelly, Shona, Clyde Hertzman, & Mark Daniels (1997). Searching for the biological pathways between stress and health. *Annual Review of Public Health*, 18: 437-62.
- Kliwer, W., & Sandler, I.N. (1992). Locus of control and self-esteem as moderators of stressor symptom relations in children and adolescents. *Journal of Abnormal Child Psychology*, 20: 393-413.
- Kliwer, W., & Sandier, I. N. (1992). Locus of control and self-esteem as moderators of stressor-symptom relation in children and adolescents. *Journal of Abnormal Child Psychology*, 20: 393-413.
- Lazarus, R.S., & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer.
- Lefcourt, H.M., & Davidson-Katz, K. (1991). Locus of Control & health. In C.R. Snyder & D.R. Forsyth (eds.), *Handbook of Social & Clinical Psychology: The Health Perspective* (246-266). New York: Pergamon Press
- Luthar, S.S. (1991). Vulnerability and resilience: A study of high-risk adolescents. *Child Development*, 62: 600-616.
- Meier, L. L., Semmer, N. K., Elfering, A., & Jacobshagen, N. (2008). The double meaning of control: Three-way interactions between internal resources, job control, and stressors at work. *Journal of Occupational Health Psychology*, 13 (3): 244-258
- Nadia, G., & Rene, D. (1996). Perceived social support from family, school, and peers: Relationship with emotional and behavioural problems among adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 35: 1657-1664.
- Ng T., Sorensen, K., & Eby, L. (2006). Locus of control at work: a meta-analysis. *Journal of Organizational Behaviour*, 27 (8): 1057-1087.
- Owen, S. S. (2006). Occupational stress among correctional supervisors. *The Prison Journal*, 86 (2): 164.
- Parasuram, S., Greenhaus, J.H. & Gaurose, C.S. (1992). Role stressors, social support & well-being among two-career couples. *Journal of Organizational Behaviour*, 13: 339-356
- Paul, M.L., S.H. James, P.M. Richard, & R.W. Williams (2005), Disparities in Health: Results from the Americans' Changing Lives Study* *Journal of Health and Social Behavior*, Vol 46 (September): 274-288.
- Rotter, J. (1966). Generalized Expectancies for Internal versus External Control of Reinforcements. *Psychological Monographs*, 80: 1-28.
- Rotter, J.B. (1954). *Social Learning & Clinical Psychology*. Englewood Cliffs, NJ: Prentice Hall.
- Smith, M., Segal, R. & Segal, J. (2011). Improving emotional health. *Health guide*.
- Spector, P. E. (1988). Development of the work locus of control scale. *Journal of Occupational Psychology*, 61: 335-340.
- Spector, P.E., & O'Connell, B.J. (1994). The contribution of personality traits, negative affectivity, locus of control and Type A to the subsequent reports of job stressors and job strains. *Journal of Occupational and Organizational Psychology*, 67: 1-11.
- St. Paul Fire and Marine Insurance Company [1992]. American workers under pressure: Technical report.
- Thoits, E. (1982). Social Support as Coping Assistance. *Journal of Consulting & Clinical Psychology*, 54: 416-423

- Turner, R.J. & Avison, W.R. (2003) Status variations in stress exposure: implications for the interpretation of research on race, socioeconomic status, and gender. *Journal of Health Social Behaviour*, 2003 Dec; 44 (4): 488-505.
- Turner, R. Jay & Donald A. Lloyd. (1999). The Stress Process and the Social Distribution of Depression. *Journal of Health and Social Behaviour*, 40 (4): 374-404.
- Wallston, B.S. & Wallston, K. A. (1978). Locus of control and health: A Review of the literature. *Health Education Monographs*, 6: 107-117.
- Wheaton B. (1985). Models for the stress-buffering functions of coping resources. *Journal of Health and Social Behaviour*, 26: 352-364.
- Windle, M., & Windle, R.C. (1996). Coping strategies drinking motives, and stressful life events among middle adolescents: associations with emotional and behavioural problems and with academic functioning. *Journal of Abnormal Psychology*, 4: 551-560.
- World Health Report (2001). Mental Health: New Understanding, New Hope, World Health Organization.

Keyv

*
**

STUDY OF BURDEN IN PARENTS OF CHILDREN WITH MENTAL RETARDATION

Kuldeep Singh, Raj Kumar**, NovRattan Sharma*** and
Dharmender Kumar Nehra*****

ABSTRACT

Current research findings have indicated that diagnosis of mental retardation in a child is commonly experienced as having a devastating effect on parent's lives. Parents or care-givers are definitely the heart of the family; who not only has to deal with the issues associated with child's disability but also has to maintain the household. To date, a number of studies have demonstrated that caregivers are more vulnerable to develop mental and physical problems as compare to non-caregivers. The present study assessed and compared the family burden among the parents of children with mental retardation and healthy controls. Family Burden Interview Schedule was administered on 50 parents of children diagnosed with mental retardation (Department of Psychiatry) and 50 parents of healthy controls (Dental department) P.G.I.M.S. Rohtak . Statistical analysis was done using SPSS- 16.0. The results revealed a high prevalence of burden in study group. Further in comparison, a significant difference was found between study group and healthy control group. Study group showed significant higher level of burden than healthy control group. Therefore, it is very important that mental health professionals to take care for these populations as individuals.

Keywords: Mental Retardation, Disability, Care-givers, and Family burden.

* Psychiatric Social Worker, Hisar, Email Kuldeep.olla@gmail.com

** Clinical Psychologist, Savera Drug De-Addiction Centre, Hisar.

*** Professor, Department of Psychology, M.D.U Rohtak.

**** Clinical Psychologist, State Institute of Mental Health, PGIMS Campus, Rohtak.

INTRODUCTION

Mental Retardation (MR) is defined as a disability characterized by remarkably low intellectual functioning ($IQ < 70$) in conjunction with significant limitations in adaptive functioning (American Association on Mental retardation, 2002). Worldwide prevalence of mental retardation is reported to be as high as 2.3% (Franklin & Mansuy, 2011), and in India it is reported to be around 2% for mild mental retardation and 0.5% for severe mental retardation (defined as IQ less than 50) (Srinath & Girimaji, 1999). In National Sample Survey of 2004, 94 people per 100,000 were found to be mentally retarded (National Sample Survey Organization, 2004). A series of factors are identified that can cause mental retardation but even though in at least 30 to 50 percent of cases, physicians are unable to determine etiology despite thorough evaluation (Armatus, 2009).

The fact that in addition to the core symptoms, children and adolescents with Intellectual disability often display a number of co-morbid behavioural problems, makes the situation more complex (Dykens, 2000; Einfeld, Piccinin, Mackinnon, 2006). Many researchers have concluded that the incidence of mental illness in persons with mental retardation is highest for persons classified as mildly or moderately mentally retarded (Jacobson, 1982; Iverson, & Fox, 1989). The liability associated with rearing such mentally handicapped children usually affects whole of atmosphere of home including routine family life, emotional aspects and financial resources of family (Kaur & Arora, 2010). Hence, for a parent, providing the high level of care required by a child with mental retardation may become taxing and may impact both physical and psychological health of caregivers.

Caregiver burden is defined as "a multidimensional response to physical, psychological, emotional, social and financial stressors usually associated with the experience of caring" (Kasuya, Polgar-Bailey, Takeuchi, 2000). Burden of care has two components namely subjective and objective burden (Hoeing & Hamilton, 1966). Objective burden includes measurable effects such as economic burden, caregivers' loss of work, social and leisure activities, household disruptions such as child care, restrictions on relationships within and outside the family etc. Subjective burden is mainly the psychological sufferings of the caregivers themselves and is experienced by them such as depression, hatred, uncertainty, guilt, shame, embarrassment etc (Ravindranadan & Raju, 2007). Irrespective of the level of mental retardation; it is for sure that caregivers have to cope with their special needs and therefore disability in children are not only problem for affected children, but in real sense they are 'family disease' (Witt, Riley, Coiro, 2003). This seems more germane in our country where family bears the main burden of caring for such persons unlike in the developed world. Experts explain that in India families assume the role of primary caregivers for numbers of reasons (i) the Indian tradition of interdependence and concern for near and dear ones in

adversities and (ii) there is a paucity of trained mental health professionals required to cater to the vast majority of the population; hence, the clinicians depend on the family" (Avasthi, 2010).

There is no doubt that mental retardation (MR) is a life-long disability with has a major impact on the lives of the children and their families. While raising a child with chronic condition, parents experience psychological stress and disappointment when their child does not meet their hopes and expectations (Barnett, Clements, Kaplan-Estrin, Fialka, 2003). Caring for those who are MR is often itself stressful as care-giving affects several aspects of caregiver's life negatively including poor physical and emotional state (Pinquart & Sörensen, 2003; Vitaliano, Zhang, & Scalan, 2003). Caregivers experience depression, burden, less social support, and less coping resources than non-caregivers (Vitaliano et al., 2002). As a general agreement, mental retardation can impose psychological problems, social issues, and lifestyle restrictions that can affect quality of life of the caregivers and family members, who also bear the considerable indirect costs of patients' disability. But this is only one side of the coin; there are examples where act of caregiving is found to be associated with experiencing subjective gains and satisfaction (Kulhara, Kate, Grover, Nehra, 2012). Researchers concluded that as youth's symptoms improved, caregivers' symptoms might also benefit from reduced stress associated with a symptomatic child (Silverman, Kurtines, Jaccard, & Pina, 2009; Carrion, Kletter, Weems, Berry, Rettger, 2013). Its strong impact, make it of extreme importance to investigate its mechanisms and find new avenues towards its potential prevention and treatment for caregivers. It can be assumed that the negative consequences of burden on caregivers may harm their care giving effectiveness, whereas experiencing subjective gains and satisfaction may enhance their caregiving ability. Hence present study is planned to assess the degree of perceived burden among the parents of children diagnosed with mental retardation and to compare them with normal controls in Indian setting.

METHOD

Sample

The data was collected from 50 parents of children diagnosed with mental retardation and 50 parents of healthy controls. The place of the data collection was the Department of Psychiatry and Dental Department P.G.I.M.S. Rohtak

Inclusion Criteria

- The parents who were living with the child with mental retardation (I.Q. below 70)
- The parents who were living with healthy children
- Age of child below 15 years
- Either parent of the child (preferably mother).

Exclusion Criteria

- Any psychiatric illness in parents in both groups.

Tools Used

The following tools were used for the present study:

- **Socio-demographic Performa:** A special Performa designed for this study was used to gather socio-demographic details about the subjects.
- **Family burden interview schedule:** Family Burden Interview schedule developed by Pai and Kapur, 1981 was used to assess family burden.

This scale measures objective aspects of burden and it contains six general categories of burden, each having two to six individual items for further investigation. Subcategories include: Financial burden, Effects on family routine, Effects on family leisure, Effects on family interaction, Effects on physical health of family members and Effects on mental health of other family members.

Procedure

Total of 100 parents of children was assessed. 50 parents were recruited from the Dept. of Psychiatry and who had child diagnosed with mental retardation. Another 50 parents of healthy children were recruited from the Dental Department. Subjects fulfilling the inclusion criteria were selected for the study. A written informed consent was taken from them and the objectives and the procedures of the study were explained in detail.

RESULTS AND DISCUSSION

The study is exploratory in nature so the suitable statistical package for social science (SPSS: version 16.0) was used.

TABLE 1: Socio-demographic details of the study and control group

Variable	Item	Study group	Control group	
			(N=50) N (%)	(N =50) N (%)
Age	Mean± SD		34±7	30.92±3
Gender	Male		8 (16%)	—
	Female		42(84%)	50(100%)
Residence	Urban		45(90%)	28(56%)
	Rural		5(10%)	22(44%)
Marital status	Married		50(100%)	50(100%)
Occupation	Unemployed		7(14%)	1(2%)
	Housewife		40(80%)	43(86%)
	Salaried		2(4%)	5(10%)
	Business/self employment		1(2%)	1(2%)
Religion	Hindu		49(98%)	49(98%)
	Sikh		1(2%)	1(2%)

Education	Illiterate	20(40%)	1(2%)
	< Secondary	22(44%)	28(56%)
	> Secondary	8(16%)	21(42%)
Family type	Joint	20(40%)	27(54%)
	Nuclear	30(60%)	23(46%)

Table 2: Significance of Mean Difference in Study Group and Control Group on family burden scale

<i>Variables</i>	<i>Study Group</i> (N=50) (Mean $\pm$ SD)	<i>Control group</i> (N=50) (Mean $\pm$ SD)	<i>T</i>
Financial burden	6.74 $\pm$ 1.68	0.68 $\pm$.51	24.290
Financial burden	6.74 $\pm$ 1.68	0.68 $\pm$.51	24.290*
Disruption of Routine family Activity	2.48 $\pm$.88	0.30 $\pm$.46	15.418*
Effect on Physical health of others	2.42 $\pm$.94	0.58 $\pm$.49	12.132*
Effect on mental health of others	7.80 $\pm$ 1.86	0.10 $\pm$.30	28.852*
Disruption of family leisure	7.86 $\pm$ 1.88	0.14 $\pm$.35	28.478*
Disruption of family Interaction	2.56 $\pm$ 1.12	0.22 $\pm$.41	13.755*
Subjective burden	4.88 $\pm$ 1.27	0.16 $\pm$.37	25.193*
Total	31.80 $\pm$ 6.46	2.18 $\pm$ 1.24	31.802*

*p < .01

Mental health professionals are the front line for treating team but role of caregivers cannot be ignored who continuously engaged in informal care of the sufferer. This informal care is the unpaid provision of care to a dependent person by family members or friends, has been considered the backbone of any long-term care system (Colombo, Llena-Nozal, Mercier, & Tjadens, 2011). A caregiver provides physical and psychological support for a family member or friend, beyond what is typical of their relationship (Bridges, 1995). This has now been demonstrated that family members face financial problems, difficulty enjoying leisure activities, and various degree of distress while trying to understand the behaviour of patients living at home (Chieko, Shinji, Tomoko, Ryoji, Yasuo Fujii, Fumio, Toshinori 2002). It is well established that high degree of burden is associated with female, old age, low educational level, without employment and who are taking care of younger patients (Caqueourizar et al, 2006). The purpose of the present study was to compare Family burden in parents of children with mental retardation (MR) and healthy controls. With a movement away from the institutional care and towards the home based care of persons with MR, it is the family that bears the brunt in caring for their disabled relative (Farber, 1959). A combination of factors appears to predict the likelihood of burden experienced

by the caregiver. In present study parents in study group perceived high level of burden. This is corroborating with the findings of another study (Sethi, Bhargava, Dhiman, 2007). More specifically, mothers of children with MR displayed lower physical health, impairment in social relationships, in their psychological state and poorer perception of their environment. These findings are in accordance with previous studies, reporting parents of children with MR, particularly mothers, experience more burden than parents of typically developing children (Upadhyaya & Havalappanavar, 2008). When compared with normal controls, the experimental group experienced higher level of burden and the level of burden increased as the severity of MR increased. These findings are in keeping with those by the earlier investigators (Girolametto & Tannock, 1994). The possible reasons for this could be that a mothers spent more time with the children while caring for them; most mothers were home-makers without additional help and also were restricted to home with no time or provision for leisure activity (Beckman, 1983).

Involving caregivers in treatment may improve their attitude toward patients with psychiatric problem and, in doing so, enhance patients' adherence and outcome (Sher, McGinn, Sirey, Meyers, 2005). Caregiving is generally considered as a cumbersome and difficult work. Although many families show a strong resilience in caring for an ill relative, their share of physical and emotional distress cannot be ignored (Swaroop, et al., 2013). It seems quite obvious that excessive burden negatively impact the caregiving process. Hence, family caregivers who provide care to other family members also need supervision or assistance in illness or disability (Medical Condition Dictionary, 2011). Present findings also highlight the importance of self-care for caregiver. Therefore, we advocate various tips suggested by experts that should be given to the care givers to balance their critically important care giving role with their own health and wellbeing (Sahoo, Brahma, Mohapatra, 2010).

CONCLUSION

Growing evidence suggests that care giving to these children leads burden to the caregivers that are the reason that prevailing stress or burden is reported by these individuals. Understanding how to manage the negative consequences of caregiving is critical to developing and implementing realistic, appropriate response strategies. There is no doubt that psychological evaluation and intervention programs should be considered as vital adjuncts to the management of MR; particularly among inaccessible segments of the population. The present findings have practical implications for assessing the health needs of caregivers who are taking responsibilities of a child with mental retardation or intellectual disability. In our country where we have limited resources and it is high time that we should realize that we may not develop holistic health of the patient if the caregivers are overburdened. So treatment providers should also shift their

focus to the mental health of care givers too along with that of individuals with MR. Having health caregivers can maximize the chances of MRs successful resettlement in society; it will be associated with increased met needs.

REFERENCES

- Armatas, V. (2009). Mental retardation: definitions, etiology, epidemiology and diagnosis. *Journal of Sport and Health Research*, 1 (2): 112-122.
- Avasthi, A. (2010). Preserve and strengthen family to promote mental health. *Indian Journal of Psychiatry*, 52 (2): 113-126.
- Barnett, D., Clements, M., Kaplan-Estrin, M. & Fialka, J. (2003). Building New Dreams, supporting parents' adaptation to their child with special needs, *infants and young children*, 16 (3): 184-200.
- Beckman, J. (1983). Influence of selected child characteristics on stress in families of handicapped infants. *American Journal of Mental Deficiency*, 88: 150-156.
- Bridges, B.J. (1995). *Therapeutic caregiving: A practical guide for caregivers of person's with Alzheimer's disease and other dementia causing diseases*. Washington, DC: BJB.
- Caqueo-Urizar, A. & Gutiérrez-Maldonado, J. (2006). Burden of care in families of patients with schizophrenia. *Quality Life Res*, 15 (4): 719-724.
- Carrión, V.G., Kletter, H., Weems, C.F., Berry, R.R. & Rettger, J.P. (2013). Cue-Centered Treatment for Youth Exposed to Interpersonal Violence: A Randomized Controlled Trial. *Journal of Traumatic Stress*, 26: 654-662.
- Chieko, H., Shinji, S., Tomoko, S., Ryoji, M., YasuoFujii, Fumio, K. & Toshinori, K. (2002). Burden on Family Members of the Mentally Ill: A Naturalistic Study in Japan. *Comprehensive Psychiatry*, 43 (3): 219-222.
- Colombo, F., Llana-Nozal, A., Mercier, J. & Tjadens, F. (2011). *Help wanted? Providing and paying for long-term care*. OECD Health Policy Studies. doi:10.1787/9789264097759.
- Dykens, E.M. (2000). Psychopathology in children with intellectual disability. *Journal of Child Psychology Psychiatry*, 41 (4): 407-417.
- Family caregiver. In: Medical Condition Dictionary. (2010-2011). Available from: <http://medconditions.net/family-caregiver.html>, accessed on August 16, 2011.
- Farber, B. (1959). *Effect of severely retarded child on family integration*, *Monographs of the society for research child in development*, 24: 5-12.
- Franklin, T.B. & Mansuy, I.M. (2011). The involvement of epigenetic defects in mental retardation. *Neurobiology of Learning and Memory*, 96: 61-67.
- Girolametto, L., Tannock, R. (1994). Correlates of directiveness in the interactions of fathers and mothers of children with developmental delays. *Journal of Speech and Hearing*, 37: 1178-53.
- Hoeing, J. & Hamilton, M.W. (1966). Elderly Psychiatric Patients and the Burden on Household. *Psychiatry Neurologia*, 152: 281-293.
- Iverson, J.C. & Fox, R.A. (1989). Prevalence of psychopathology among mentally retarded adults. *Research in Developmental Disabilities*, 10: 77-83.
- Jacobson, J.W. (1982). Problem behavior and psychiatric impairment within a developmentally disabled population: Behavior frequency. *Applied Research in Mental Retardation*, 3: 121-139.

- Kasuya, R.T., Polgar-Bailey, P. & Takeuchi, R. (2000). Caregiver burden and burnout. A guide for primary care physicians. *Postgraduate Medicine*, 108: 119-123.
- Kaur, R. & Arora, H. (2010). Attitudes of Family Members Towards Mentally Handicapped Children and Family Burden. *Delhi Psychiatry Journal*, 13 (1): 70-74.
- Mental Retardation: Classification and Systems of Supports. (2002). American Association on Mental retardation, 10th ed. Washington.
- National Sample Survey Organisation. A report on disabled persons. New Delhi: Department of Statistics, Government of India; 2004. Available at: www.ncasindia.org
- Pai, S. & Kapur, R.L. (1981). The burden on the family of a psychiatric patient: development of an interview schedule. *British Journal of Psychiatry*, 138: 332-335.
- Pinquart, M. & Sörensen, S. (2003). Differences between caregivers and noncaregivers in psychological health and physical health: A meta-analysis. *Psychology and Aging*, 18: 250-267.
- Ravindranadan, V. & Raju, S. (2007). Adjustment and attitude of parents of children with mental retardation. *Journal of the Indian Academy of Applied Psychology*, 33: 137-141.
- Sahoo, S., Brahma, P.K. & Mohapatra, P.K. (2010). Burden of caregiver's among the mentally ill and diabetic patients – a comparative study. *Orissa Journal of Psychiatry*, 39-47.
- Sethi, S., Bhargava S.C. & Dhiman, V. (2007). Study of Level of Stress and Burden in the Caregivers of Children with Mental Retardation. *East Journal of Medicine*, (12): 21-24.
- Sher, I, McGinn, L., Sirey, J.A. & Meyers, B. (2005). Effects of caregivers' perceived stigma and causal beliefs on patients' adherence to antidepressant treatment. *Psychiatry Survey*, 56 (5): 564-569.
- Silverman, W.K., Kurtines, W.M., Jaccard, J. & Pina, A.A. (2009). Directionality of change in youth anxiety treatment involving parents: An initial examination. *Journal of Consulting and Clinical Psychology*, 77: 474-485.
- Srinath, S. & Girimaji, S.R. (1999). Epidemiology of child and adolescent mental health problems and mental retardation. *NIMHANS Journal*, 17 (4): 355-366.
- Swaroop, N., Shilpa, R., Ramakrishna, G., Maria, A., Tony, M., Anjali Pal, Vimal, J., Twinkle, A. & Geetha, J. (2013). Burden among Caregivers of Mentally- Ill Patients: A Rural Community - Based Study. *International Journal of Research and Developmental Health*, 1 (2): 29-34.
- Upadhyaya, G.R. & Havalappanavar, N.B. (2008). Stress in Parents of the Mentally Challenged. *Journal of the Indian Academy of Applied Psychology*, 34: 53-59.
- Vitaliano, P.P., Scanlan, J.M., Zhang, J., Savage, M.V., Hirsch, I.B. & Siegler, I.C. (2002). A path model of chronic stress, the metabolic syndrome, and coronary heart disease. *Psychosomatic Medicine*, 64: 418-435.
- Vitaliano, P.P., Zhang, J. & Scanlan, J. (2003). Is caregiving hazardous to one's physical health? A meta-analysis. *Psychological Bulletin*, 129: 946-972.
- Witt, W.P., Riley, A.W. & Coiro, M.J. (2003). Childhood functional status, family stressors and psychosocial adjustment among school-aged children with disabilities. *US Pediatric Adolescent Medicine*, 157 (7): 687-695.

PSYCHOLOGICAL DISTRESS AMONG PEOPLE LIVING WITH HIV/AIDS

Pooja Pandey* and Archana Shukla**

ABSTRACT

The present study used GHQ-12 to assess psychological distress of a small sample of people living with HIV/AIDS (PLHA) drawn from two low prevalence States of India. Respondents' GHQ scores were variously analyzed to explore gender differences in psychological distress. The data from the present study were then compared with secondary data obtained from two other published studies to examine extent of psychological distress in various clinical and nonclinical groups. Together these analyses revealed that female PLHA experience greater overall psychological distress than male PLHA, male PLHA are more distressed on account of their inability of handling problems of daily living while female PLHA are more distressed because of worrying, and that PLHA as a group experience considerably greater distress than either cancer patients, patients in palliative care, unemployed males and females and also school leavers. The present study highlights how in addition to the medical intervention there is also an intense urgent need for social and cognitive skills training to PLHA to facilitate them in handling their distress by rational thinking, worry control and planned positive living.

Keywords: Cognitive skills training, Medical intervention, Psychological distress, Emotional state, and People living with HIV

INTRODUCTION

Psychological distress can be defined as "the unique discomforting, emotional state experienced by an individual in response to a specific stressor or demand that results in harm, either temporary or permanent, to the person" (Ridner, 2004).

* Sr. Capacity Building Officer, GFATM R-7 Project Psychology Department, Lucknow University, Lucknow – 226007 or to Email: poojapandey09@gmail.com
** Prof. Psychology Department, Lucknow University, Lucknow – 226007 or to Email: archana1942@sify.com

Psychological distress is viewed as an emotional condition that involves negative views of the self, others and the environment and is characterized by unpleasant subjective states such as feeling tense, worried, worthless and irritable (Barlow and Durand, 2005). It is often used as an indicator of general health.

Not much published literature is available throwing light on the subjective health perceptions, psychological distress, and psychiatric morbidity of people living with various chronic illnesses such as HIV/AIDS and cancer. Chronic illnesses such as these are not only life threatening (Wasti et al., 2011; Mühlbacher et al., 2013), but also require adherence to lifelong medication (Vallabhaneni et al., 2012; Abassa et al., 2008; Wools-Kaloustian et al., 2009), frequent hospitalization (Scandlyn, 2000), and attract substantial stigma and discrimination (Nyblade et al., 2009; Kinsler, 2007) besides coping with adverse mental health consequences of AIDS-related bereavement (Hansen et al., 2009). Persons living with chronic illnesses have to thus not only negotiate their own illness and the related complications, they also have to endure expected and experienced stigma from others, sometimes even from their own caregivers (Dieleman et al., 2007; Uebel et al., 2007; Nyblade, 2009).

The psycho-social scenario surrounding HIV/AIDS could be much worse as there seems much more stigma and discrimination, allegations, gossip and character assassination for persons infected and affected by HIV/AIDS than there is for cancer or other chronic illnesses. If such a person happens to be a female the story becomes all the more tragic in view of a female's physical, psychological, financial dependence, (Esplen, 2007), powerlessness (Seesay, 2010), low social status (Lippitt, 2008) and therefore poor access to health services (Becker & Newsom, 2003) in many traditional societies like that of India.

Against such a background, the present study has been designed to focus on the psychological distress among people living with HIV/AIDS (PLHA). The study also attempted to identify areas of specific difficulty in PLHA's subjective health perceptions. Then, by utilizing secondary data from other sources, the present study went on to compare psychological distress of people living with HIV/AIDS (PLHA) with three other groups - people living with Cancer (PLWC), people in palliative care, and those representing the general community.

METHOD

Sample

A small nonprobability sample of 54 people (26 males and 28 females) living with HIV/AIDS from the low prevalence states of Uttar Pradesh and Uttarakhand were included in the present study. The inclusion criteria were that the respondents have HIV sero-positive status and were taking Anti retroviral therapy (ART) from designated ART centers by National AIDS Control Organization (NACO) under the Ministry of Health, India. Sample characteristics were as follows: all

respondents were married; their age ranged from 30 years to 45 years; their education ranged from class VIII to graduation; and their income per month ranged from 'no income' to Rs. 10,000.00.

Tools

Following tools were used in the present study:

1. *General Health Questionnaire (GHQ-12)*: Psychological distress was assessed in the present study using the 12 items version of the General Health Questionnaire (GHQ-12). The GHQ-12 is a widely used and validated instrument designed to screen for psychological distress (Goldberg & Williams, 1998). Each item in the GHQ-12 assesses the severity of distress over the past few weeks and uses a four point rating scale from 'less than usual', 'no more than usual', 'rather than more usual', to 'much more than usual'. The GHQ-12 gives a total score of 12 or 36 depending on the scoring method selected. The most common scoring methods are binary (0-0-1-1) and Likert (0-1-2-3). Half of the GHQ-12 items (1,3,4,7,8,12) are negatively worded yet response categories are so formatted that these items do not require reverse scoring. A higher total score on GHQ-12 indicates greater psychological distress and hence poorer health and vice versa.

Procedure

Respondents were contacted at the Community Care Centers (CCCs) and the District Level Networks (DLNs). Community Care Centers (CCCs) are places where HIV infected people stay for five days when they start taking ART medicines for the first time. This is required so that medicine is administered under supervision, the clients get attuned to medications, its side effects if any can be managed immediately and psychosocial support and counseling is made available as per the clients' needs. District Level Networks (DLNs) are places where legal assistance, opportunities for rehabilitation and peer support are made available to people living with HIV/AIDS. Several visits were made to the CCCs and the DLNs to get familiarized about the psycho-social working conditions of these places, their record keeping, daily schedules of the PLHA, time of the day when the PLHA were likely to be relatively less occupied, etc. During these visits, preliminary discussions were held with the PLHA for ice breaking activities and also checking their eligibility for inclusion in the present sample.

After the PLHA were sampled, the purpose of the study was explained to them, rapport was build, and written informed consents were obtained from them. Face-to-face personal interviews in an easy and slow paced manner supplemented with GHQ-12 were conducted with individual respondents. Usable completed questionnaires could be obtained from 28 female and 26 male PLHA. Response rate was 69.23 %.

In the present study, the binary method (0-0-1-1) of scoring GHQ-12 was used to assess psychological distress among people living with HIV/AIDS (PLHA). The Likert method (0-1-2-3) of scoring GHQ-12 was used to examine percentages of male vs. female PLHA falling into various categories of severity of psychological distress, to identify major areas of psychological distress for male and female PLHA and to compare psychological distress of the present sample of PLHA with the secondary data obtained from elsewhere about cancer out-patients, people in palliative care and those from the general community.

RESULTS AND DISCUSSION

In Table 1 are presented percentage of HIV infected males, females and total sample saying 'yes' to the various GHQ items. Column 1 in this Table presents the 12 GHQ items. Six of these 12 items - #1,3,4,7,8 and 12 - are positively worded and are shown here in bold for easy differentiation. A comparison of cell values in columns 2 and 3 offers insights about major gender related differences in health perceptions by the present sample of people living with HIV/AIDS or PLHA while column 4 presents health perceptions of the total sample of PLHA. The mean GHQ score of PLHA (n=54) was 27.18.

Table 1: Percentage* of respondents saying 'Yes' to each of the 12 GHQ items

S. No.	1 GHQ- 12 Items	2 Male PLHA N=26	3 Female PLHA N=28	4 All PLHA
1	Been able to concentrate on what you are doing	50	25	37.04
2	Lost much sleep over worry	46.15	71.43	59.26
3	Felt you were playing a useful part in things.	57.69	39.29	48.15
4	Felt capable of making decisions about things.	57.69	25	40.74
5	Felt constantly under strain.	53.85	60.71	57.41
6	Felt you could not overcome your difficulties.	53.85	46.43	50
7	Been able to enjoy your normal day-to-day activities.	61.54	75	68.52
8	Been able to face up to your problems.	57.69	53.57	55.56
9	Been feeling unhappy and depressed.	65.38	50	57.41
10	Been losing confidence in yourself.	53.85	39.29	46.3
11	Been thinking of yourself as a worthless person.	50	32.14	40.74
12	Been feeling reasonably happy, all things considered.	53.85	53.57	53.7

*Binary method was used for calculating %

On five out of the six positively worded items percentage of female PLHA reporting agreement is smaller than that of the male PLHA. Fewer females than males agree that recently they have been able to concentrate on and enjoy whatever they were doing, played a useful part in things, felt capable of making decisions, faced up to their problems, and felt reasonably happy all things considered. On two out of the six negatively worded items (2 and 5) much greater percentage of female PLHA showed agreement. Cell entries in column 4 suggest that psychological distress in the total sample of PLHA mainly consists of worry (item

2), strain (item 5), difficulties (items 6), unhappiness (item 9) and depression (item 9).

After analyzing gender related differences in PLHA's responses to individual GHQ items, an attempt was next made to re-analyze GHQ scores to assess differences in percentage of the male and the female PLHA that could be categorized as showing low to severe psychological distress. The objective of this analysis was to obtain additional information on gender differences in psychological distress among the PLHA. Goldberg *et al.* (1997) have earlier shown that in the Likert scoring method a score of 1-10 indicates 'low psychological distress'; 11-12 is 'typical'; 13-15 is 'more than typical'; 16-20 shows 'evidence of psychological distress'; and scores over 20 indicate 'severe distress'. The results obtained using Goldberg's categorizations suggest that among male PLHA 73% show severe distress, 19% show more than typical distress, 4% each show clear evidence of psychological distress and typical distress and none fall in the category of low psychological distress. Fig 2 referring to female PLHA, in contrast, presents an extreme picture. It clearly demonstrates that all of the female PLHA sampled in the present study score above 20 and hence can be categorized as showing severe distress.

Goldberg (1978) had earlier indicated that in the binary method of scoring GHQ a score of 2 or more is indicative of psychological distress. An attempt was therefore made to compute percentages of the present sample of male and female PLHA who endorsed 2-9 of the 12 GHQ items. These percentages are presented below in Table 2. The analysis indicated that 34.59 % of the male PLHA report experiencing 2-9 of the problems while the same % for female PLHA is 74.98. This further lends credence to the argument that most PLHA experience considerable psychological distress and that this scenario is particularly worse in the context of female PLHA.

Table 2: Percentage of PLHA endorsing a 2-9 of the 12 GHQ items

<i>No. of GHQ Items endorsed</i>	<i>Males n=26</i>	<i>Female n=28</i>	<i>Total n=54</i>
09 Items	11.53	7.14	9.26
08 Items	7.69	7.14	7.40
07 Items	7.69	0.00	3.70
06 Items	3.84	25.00	14.81
05 Items	0	17.85	9.25
04 Items	0	10.71	5.55
03 Items	0	3.57	1.85
02 Items	3.84	17.85	11.11
% endorsing 2 - 9 items	34.59	74.98	62.93

An attempt was next made to assess area wise psychological distress among the male and the female PLHA. For this an intuitive pulling out of thematically important areas from the GHQ was undertaken-somewhat akin to doing factor analysis that statistically yields 'principle' components. This is a novel way of analysis that has never been attempted before in spite of the fact that GHQ has been in popular circulation for over more than two decades. A content analysis of the 12 GHQ items revealed that these are woven around six principle affect areas. For each of these six areas there is one negatively worded item and one positively worded item. For example items #1 and 7 refer to 'Daily Activities', 2 and 5 to 'Worry/Strain', 3 and 11 to 'Worthlessness', 4 and 10 to 'Incapability of Decision Making', 9 and 12 to feeling 'Unhappy/Depressed' and 6 and 8 to 'Inability to handle problems'. The 12 items were paired as shown above to yield six areas of psychological distress. Thereafter for each respondent area wise scores were calculated. A respondent's score in each area could range from 0-2 as scores across two items per area were summated. These are presented in Table 3.

This analysis indicated that male PLHA experienced greatest psychological distress regarding 'inability to handle problem' (#6) while for the female PLHA the greatest psychological distress resulted from 'worrying' (#2). The three other areas where in considerable psychological distress was experienced by both male and female PLHA alike were 'not being able to enjoy daily activities' (#1), feeling 'worthless' (#3), and 'unhappy/depressed' (#5). The main advantage of this analysis accrued in showing that much of the psychological distress in people living with HIV/AIDS is caused because of their dysfunctional cognitions (feeling worthless, unhappy, depressed, and not enjoying, etc.) rather than because of some real adverse situational event.

Table 3: Area wise psychological distress (two GHQ items per area)*

<i>Distress Areas</i>	<i>GHQ item no.</i>	<i>Male' Scores</i>	<i>Female' Scores</i>	<i>Scores for the Total Sample</i>
1. Not Enjoying Daily Activities	1,7	1.11	1.00	1.05
2. Worry	2,5	1.00	1.32	1.16
3. Worthlessness	3,11	1.07	0.71	0.88
4. Incapability of Decision Making	4,10	1.11	0.64	0.87
5. Unhappy/Depressed	9,12	1.11	1.00	1.05
6. Inability to handle problems	6,8	1.19	1.03	1.11

*Binary method was used for analyzing area wise distress.

Thus the four analyses reported above with respect to the individual GHQ items, categorization of respondents on the basis of severity of psychological distress as suggested by Goldberg, % of male and female PLHA endorsing 2-9

of the 12 GHQ items and area wise assessment of psychological distress showed that female PLHA not only experience considerably more psychological distress in comparison to the male PLHA, the content of this distress too varies. While worrying majorly causes female PLHA's psychological distress, the same for male PLHA results from their inability to handle problems of daily living among other things.

After assessing and confirming gender differences in psychological distress, an attempt is next made to compare psychological distress of people living with HIV/AIDS with that of people living with cancer, in palliative care, and from the general community. For this, data from two previous studies by Gao *et al.* (2010) and Bank *et al.* (1980) are utilized. Comparing the mean of the present PLHA (n=54) sample, *i.e.* 27.18 was much more than Bank *et al.* (1980) sample of employed male and female varying from 8.53 to 9.71 and those of unemployed male and female from 13.84 to 15.61. Gao *et al.* (2010) reported mean GHQ score of cancer out patients (n=200) as comparing general community (n=364) as 10.6 and that of having palliative care (n=150) equal to 16.8 those being quiet small than present PLHA (n=54) with mean GHQ of 27.18.

In the present study GHQ scores of people living with HIV/AIDS were variously analyzed to explore gender differences in psychological distress among them. The data from the present study were then compared with secondary data obtained from two other studies to examine extent of psychological distress in various clinical and nonclinical groups. Together these analyses revealed that female PLHA experience greater psychological distress than male PLHA and also that PLHA experience considerably greater distress than either cancer patients, patients in palliative care, unemployed males and females and also school leavers. The present study thus clearly suggests that in addition to the medical intervention there is also an intense urgent need for psychological intervention and social skills training to PLHA to help them acquire skills for rational thinking, worry control, re-organizing their social networks, obtaining greater social support, finding workable solutions to problems of daily living and moving on with their positive living.

High stress does not necessarily accompany HIV infection. Stress among people living with HIV/AIDS may well be a joint function of various social, attitudinal, financial factors. In a study of South African patients living with HIV/AIDS, hypertension, diabetes, and both hypertension and diabetes Kagee (2010) failed to find any significant difference in emotional distress perhaps because of the high prevalence of HIV in South Africa. Where as in a study of 575 African Americans living with HIV in the United States Shacham, Basta, and Reece (2008) found that nearly 20% of the sample reported significantly higher levels of both somatization and paranoid ideation than the normative sample. In the Indian society perhaps because of the close-knit nature of neighborhood and communities,

illiteracy, poverty, lack of infrastructure, insensitivity toward alternative sexualities, stigma and a lack of awareness about HIV transmission and management, the social scenario surrounding the HIV infected and the affected individuals is far from satisfactory. There are therefore hordes of people with high-risk behaviours who do not come forth for testing, and of HIV+ individuals who resist status disclosure, drop out from needed linkages and become lost to medical care and support. Intense social psychological intervention therefore seems crucial for both prevention of the infection and also for reduction of psychological distress later on.

General health and wellbeing among people living with HIV/AIDS or PLHA is one of the major concerns of the public health program across globe. In India, the National AIDS Control organization (NACO) makes a lot of efforts by way of designing and implementing the national program towards ensuring the same among PLHA. The program provides services for treatment care and support and counseling through Antiretroviral Therapy (ART), Community care center (CCC) positive networks, Integrated Counseling and Testing Centers, etc. Yet, to effectively tackle the complicated intricate issue of HIV/AIDS in the humongous Indian population, a coming together of various stakeholders is also extremely needed to push multidisciplinary efforts for addressing health related concerns of the HIV infected and affected individuals.

REFERENCES

- Abaasa M. A., Todd J., Ekoru K., Kalyango Joan N., Levin J., Odeke E., & Karamagi AS. C. (2008). Good adherence to HAART and improved survival in a community HIV/AIDS treatment and care programme: the experience of The AIDS Support Organization (TASO), Kampala, Uganda. *BMC Health Services Research*; 8: 241
- Barlow, D. & Durand, V. (2005). *Abnormal Psychology: An integrative approach*. Belmont, CA: Thomson Wadsworth. In *Psychological distress, mental health problems and use of health services in Ireland* by Donna Tedstone Doherty, Rosalyn Moran, Yulia Kartalova-O'Doherty, 2008: 15
- Becker, G. & Newsom, E. (2003). Socioeconomic Status and Dissatisfaction with Health Care among Chronically Ill African Americans. *Am J Public Health*; 93 (5): 742-748.
- Dieleman, M., Biemba, G., Mphuka, S., Sichinga-Sichali, K., Sissolak, D., Van der Kwaak, A. & Van der Wilt, GJ. (2007). We are also dying like any other people, we are also people': perceptions of the impact of HIV/AIDS on health workers in two districts in Zambia. *Health Policy Plan*, 22: 139-148
- Esplen, E. (2007). Women and Girls Living with HIV/AIDS: Overview and Annotated Bibliography. *International Community of Women Living with HIV/AIDS*. Bibliography no. 18.
- Gao, W., Barnett, M.I., Stark, D., Murray, S. & Higginson, I.J. (2010). Psychological distress in cancer from survivorship to end of life care: Prevalence, associated factors and clinical implications. *European Journal of Cancer*. In press.

- Goldberg, D. and Williams, P. (1998). *A user's guide to the General Health Questionnaire*. Windsor, UK: NFER-Nelson.
- Goldberg, DP., Gater, R., Sartorius, N., Ustun, TB., Piccinelli, M., Gureje, O. and Rutter, C. (1997). The validity of two versions of the GHQ in the WHO study of mental illness in general health care. *Psychological Medicine*, 27: 191-197.
- Hansen, N. B., Vaughan, E. L., and Sikkema, K. J. (2009). Health-Related Quality of Life in Bereaved HIV-Positive Adults: Relationships between HIV Symptoms, Grief, Social Support, and Axis II Indication. *Health Psychol.* 28 (2): 249-257.
- Kagee, A. (2010). Psychological distress among persons living with HIV, hypertension, and diabetes. *AIDS Care. Dec*; 22(12): 1517-21
- Kinsler, J.J., Wong, M.D., Sayles, J.N., Davis, C., and Cunningham, W.E. (2007). The effect of perceived stigma from a health care provider on access to care among a low-income HIV-positive population. *AIDS Patient Care STDs*, 21 (8): 584-592.
- Lippitt, M. (2008). *HIV-Positive Women and Political Advocacy in the United States*. P 17. <http://repository.library.georgetown.edu/bitstream/handle/10822/550891/Final%20Thesis.pdf?sequence=3>
- Mühlbacher, C. A., Stoll, M., Mahlich, J., and Nübling, M. (2013). Patient preferences for HIV/AIDS therapy - a discrete choice experiment. *Health Economics Review*: 3-14
- Nyblade, L., Stangl, A., Weiss, E., and Ashburn, K. (2009). Combating HIV stigma in health care settings: what works? *J Int AIDS Soc.*, 12 (1): 15
- Ridner, S.H. (2004). Psychological distress: concept analysis. *Journal of Advanced Nursing*, 45 (5): 536-545
- Scandlyn, J. (2000). When ADS become a chronic disease. *Western Journal of Medicine*, 172 (2): 130-133.
- Sesay, W. (2010). Female bodies: Gender inequalities, vulnerability, HIV and AIDS in Kenya. *Advancing Women in Leadership Journal*, 30 (17)
- Shacham, E., Basta, T.B., and Reece, M. (2008). Symptoms of Psychological Distress among African Americans Seeking HIV-Related Mental Health Care. *AIDS Patient Care STDs*. 22 (5): 413-421.
- Uebel, KE., Nash, J., Avalos, A. (2007). Caring for the caregivers: Models of HIV/AIDS care and treatment provision for healthcare workers in Southern Africa. *J Infect Dis*, 196 (Suppl 3): S500-S504
- Vallabhaneni S., Chandy S., Heylen E., and Ekstrand M. (2012). Reasons for and correlates of antiretroviral treatment interruptions in a cohort of patients from public and private clinics in southern India. *AIDS Care*, vol. 24, no. 6: 687-694
- Wasti, P.S., Randall, J., Simkhada, P., and Teijlingen, V. E. (2011). In what way do Nepalese cultural factors affect adherence to antiretroviral treatment in Nepal? *Health Science Journal*, 5(1): 37-47.
- Wools-Kaloustian Kara, K., Sidle John, E., Selke Henry, M., Vedanthan, R., Kemboi Emmanuel, K., Boit Lillian, J., Jebet Viola, T., Carroll Aaron, E., Tierney William, M., and Kimaiyo S. (2009). A model for extending antiretroviral care beyond the rural health centre. *Journal of the International AIDS Society*: 12:22.

Keyw
and in

V
being
emoti
as "en

*

**

CORRELATES OF WELL-BEING: A RURAL WOMEN STUDY

Kamlesh Singh, Jasleen Kaur**, Dalbir Singh***
and Shradha Suri*****

ABSTRACT

The study attempts to explore the correlation between different types of well-being (psychological, subjective and social) and interpersonal (altruism, gratitude, forgiveness, avoidance motivation and revenge motivation) and intrapersonal factors (self-esteem, resilience, and self-management). A total of 194 rural women with a mean age of 39.61 years (SD= 15.48 years) participated in the study. A quantitative schedule consisting of number of questions pertaining to all the constructs mentioned above was prepared in the Hindi language. Findings reported significant correlation of various factors with psychological well-being, (PWB), subjective well-being (SWB) and social well-being (Social WB). Avoidance motivation was the only factor which did not show correlation with well-being.

Keywords: Psychological well-being; Subjective well-being, and Interpersonal and intrapersonal factors

INTRODUCTION

Well-being is deconstructed as subjective well-being and psychological well-being. Subjective well-being is perceived as balance between positive and negative emotions and global life satisfaction whereas psychological well-being is defined as "engagement with existential challenges of life" (Diener, Suh, Lucas and Smith,

* Corresponding author: Associate Professor, Dept. of Humanities and Social Sciences, IIT Delhi [singhk.iitd @ gmail.com](mailto:singhk.iitd@gmail.com)

** Department of Humanities and Social Sciences, Indian Institute of Technology Delhi

*** Associate Professor, Pt. N. R. S. Government College, Rohtak, Haryana, India.

**** Department of Humanities and Social Sciences, Indian Institute of Technology Delhi

1999; Keyes, Shmotkin & Ryff, 2002). Psychological well-being consists of six dimensions namely; positive relations with other, self-acceptance, purpose in life, autonomy, environmental mastery and personal growth (Ryff, 1989). However, Keyes (1998) highlighted the importance of the third dimension of well-being that is social well-being. This dimension was proposed on the premises that individuals are embedded in social structures and communities and hence would determine their quality of life.

Women are often visualized as "agents of change and development" in the society thus, generating empirical interest of researchers to explore the area of women's well-being. Women in rural areas fulfill dual responsibilities of household work and working outside house. The dual role enhances stress and lowers well-being level. The Commission on the Status of Women, UN (2012) reported that rural women work for about 16-18 hours per day. They engage themselves in various activities such as field work, animal husbandry and household chores. The different stressors that affect well-being are fewer employment opportunities, economic uncertainty of farming, fatigue, emotional and social isolation (Chikani, Reding, Gunderson & McCarty, 2005; Frase, Smith, & Judd et al., 2005) and reinforcement of traditional gender roles (Bushy, 1998).

Eberhardt, Ingram, & Makuc, (2001) observed that women experienced higher level of mental distress than men regardless of their place of residence (rural or urban). A higher percent of depressed women were noticed in rural areas (Probst, Laditka, & Moore et al., 2006), thus highlighting their lower well-being. However, Harvey (2007) reported that in rural settings, despite the dearth of health care facilities, transportation, educational facilities and stringent social and environmental roles, rural women possess positive and better overall health across the lifespan. In another study, rural women identified various facilitators of well-being like fulfillment of all basic needs, socialization, healthy interpersonal relationships, friendly environment, involvement in religious activities whereas, several well-being inhibitors like lack of social support, physical painful disease, joblessness of male member/s in the family, inactive lifestyle of today's era leading to diseases, individualistic trend prevailing in society especially younger generation these days and reducing trustworthiness and rising crime in the society, Singh, Kaur and Singh (in press). The current research aims to correlated well-being with interpersonal and intrapersonal dimensions.

Several interpersonal and intrapersonal factors are known to promote well-being such as social support (Ryan & LaGuardia, 2000), relationships (Reis & Gable, 2003), religiosity (Christopher, 2000), gratitude (Froh, Sefick & Emmons, 2007), self-esteem (Zimmerman, 2000), social relationships (Argyle, 2001; Lyubomirsky, King, & Diener, 2005); resilience (Souri & Hasanirad, 2011). However, there are certain interpersonal factors which are also known to negatively affect well-being. Interpersonal transgressions (defined as a class of interpersonal stressors in which people perceive that another person has harmed them in a

way that they consider both painful and morally wrong) can have negative effects on mental health (Cullough, Root & Cohen, 2006). For example, thoughts of revenge are among the strongest elicitors of anger (DiGiuseppe & Froh, 2002), and entertaining one's grudges and thoughts of revenge lead to cardiovascular and sympathetic nervous system arousal (Witvliet, Ludwig, & Vander Laan, 2001).

The Current Study

In India, 48.6% of the women reside in the rural areas. Therefore, it was deemed important to explore the well-being of these women, who are often neglected in research. The current study is a part of a larger study that was conducted to explore the well-being of rural women. Mixed methodology was employed in this well-being project. However, it was observed that the participants found it difficult to comprehend the Likert type scale rating. Hence, the scale dimensions were changed to "yes, no and undecided" for the present research. However, most of the items were borrowed from standardized tools. Misra (1990) indicated that rural and urban India constitute of two independent subsystems. Therefore the same methodology and tools cannot be used. It is hard to understand the rural population by applying the principles and parameters that were obtained from urban samples. Moreover, research question (Misra & Paranjpe, 2012) and participants' nature should concur on relevant research methodology. To understand well-being of rural women, it was considered essential to modify the scales and a new list of items on various factors of interest was constructed.

Objectives

The present study looked at the correlation between different models of well-being (PWB, SWB, and Social WB) and interpersonal (altruism, gratitude, forgiveness, avoidance motivation and revenge motivation) and intrapersonal (self-esteem, resilience, and self-management) factors.

METHOD

Sample

The sample consisted of 194 rural women with mean age of 39.61 years ($SD = 15.48$). Out of the 194 women who submitted the information on demographic aspects; 45.9% of the women had attained education up to 10th standard, 10.3% studied up to 11-12th grade and 13.4% reported to be graduates. However, 22.2% were found to be illiterate and 8.2% did not report their educational qualification. Furthermore, 92.3% (179 women) of these were reported to be married with 3.6% widowed and 9.3% did not report their marital status.

Tool Construction

A quantitative questionnaire schedule was prepared by the authors. Since the study aimed to explore the correlation of well-being with different interpersonal

and intrapersonal factors, various relevant standardized tests - items were taken in this study. The first step involved in identifying items that appeared as simplest to comprehend from different standardized psychometric tools of interest. The second step involved translating the items into Hindi. Two bilingual experts translated the English language to Hindi language independently. The scale was back translated to ensure that no item was altered and meaning was retained. The authors and bilingual experts validated the tool. The scale was scored as Yes=1; Undecided=2 & No=3. The test consisted of 53 items measuring well-being, interpersonal and intrapersonal constructs. (Appendix-1).

Procedure

The women were approached individually. Rapport was established with the women before administration of the test. A brief overview of the study was given. For the participants who were illiterate, the authors verbally took responses for each of the item. The participants who were able to read and write filled their own questionnaire were informed about the confidentiality of responses and consent for participation was taken. The participants' verbal or written consent was taken.

RESULTS AND DISCUSSION

The data was analysed using SPSS version 15.0. Correlational analysis was employed between well-being (PWB, SWB and social WB), interpersonal (altruism, gratitude, forgiveness, avoidance and revenge) and intrapersonal factors (resilience, self-esteem and self-management) (see table-1).

Well-Being constructs significantly correlated with each other. SWB correlated positively with PWB ($r=0.41$, $p<0.01$), life satisfaction correlated with PWB ($r=0.54$, $p<0.01$) and SWB ($r=0.66$, $p<0.01$), positive affect was correlated with PWB ($r=0.45$, $p<0.01$), SWB ($r=0.53$, $p<0.01$) and LS ($r=0.68$, $p<0.01$), negative affect was negatively correlated with all the other well being constructs namely; PWB ($r= -0.22$, $p<0.01$), SWB ($r= -0.23$, $p<0.01$), LS ($r= -0.22$, $p<0.01$) and PA ($r= -0.20$, $p<0.01$). Social well-being correlated with PWB ($r= 0.26$, $p<0.01$), SWB ($r= 0.22$, $p<0.01$), LS ($r= 0.32$, $p<0.01$) and PA ($r= 0.35$, $p<0.01$). The inter-correlations between the different well-being constructs are in tune with the earlier researches. Linely, Maltby, Wood, Osborne, & Hurling (2009) demonstrated through confirmatory factor analysis that both the models of well-being are highly correlated. Similarly Kashdan, Biswas-Diener and King (2008) too proposed that SWB and PWB were closely associated than previously believed and further added that SWB may be a prerequisite of PWB. This finding was also indicated by King, Hicks, Krull and Del Gaiso (2006) who demonstrated that by inducing positive affect, participants reported higher level of meaning in life. Similarly the current study also indicates that psychological well-being, subjective happiness and social well-being were all interrelated.

Table 1: Correlation between well-being, interpersonal and intrapersonal factors

Table 1: Correlation between well-being, interpersonal and intrapersonal factors

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PWB	1													
2. SWB	.41**	1												
3. LS	.54**	.66**	1											
4. PA	.45**	.53**	.68**	1										
5. NA	-.22**	-.23**	-.22**	-.20**	1									
6. Social WB	.26**	.22**	.32**	.35**	-.11	1								
7. Altruism	.30**	.37**	.35**	.40**	-.08	.37**	1							
8. Gratitude	.13	.17*	.12	.16*	-.00	.08	.23**	1						
9. Forgiveness	.13	.16*	.14	.14	.04	.20**	.15*	.05	1					
10. Avoidance M.	-.00	.10	.08	-.06	-.02	.05	-.02	.10	-.14	1				
11. Revenge M.	-.02	.15*	.10	.03	.15*	.02	-.01	.04	-.13	.64**	1			
12. Self esteem	.24**	.30**	.32**	.57**	-.10	.23**	.32**	.20**	.08	-.11	-.02	1		
13. Resilience	.16*	.25**	.28**	.22**	-.20**	.20**	.26**	.08	.07	.13	.07	.12	1	
14. Self M	.19**	-.06	.01	.09	-.16*	.07	.02	.02	-.01	-.21**	-.20**	.15*	.06	1

Note: N= 194, ** p<0.01 & *p< 0.05 significance level. PWB=psychological well-being, SWB=subjective happiness, LS=Life satisfaction, PA=positive affect, NA=negative affect, Social WB=social well-being, avoidance M= avoidance motivation, revenge M=revenge motivation, Self M= self management.

The **interpersonal** constructs were related to well-being. Altruism was significantly correlated with PWB ($r=.30$, $p<.001$), life satisfaction ($r=.35$, $p<.01$), and PA ($r=.16$, $p<.05$). Midlarsky and Kahana (1994) opined that adult altruism was associated with improved morale, self-esteem, positive affect, and well-being. Significant association was reported between altruistic activities with well-being constructs such as positive affect and life satisfaction (Kahana, Bhatta, & Lovegreen et al., 2013; Morrow-Howell, Hinterlonh, Rozario, & Tang, 2003).

Gratitude was significantly correlated with SWB ($r=.17$, $p<.05$), positive affect ($r=.16$, $p<.05$) and altruism ($r=.23$, $p<.01$). In some studies, gratitude was positively correlated to subjective well-being (Peterson & Seligman, 2004). Gratitude on a daily basis enhances positive affect and other measures of well-being (Froh, Kashdan, Ozimkowski & Miller, 2009; Sheldon & Lyubomirsky, 2006). A significant positive correlation was also found between gratitude and forgiveness.

Significant correlation ($r=.20$, $p<.01$) was seen between forgiveness and social well-being. Toussaint and Friedman (2008) reported relationship between forgiveness, gratitude and well-being. They discussed that forgiveness and gratitude are positive psychological characteristics which are positively related to well-being and facilitated by affect and belief.

Revenge motivation was significantly positively correlated with NA ($r=.15$, $p<.05$). McCullough, Root and Cohen (2006) reported negative affect of interpersonal transgressions on mental health. Brown (2003) reported that people who tend to feel vengeful or unforgiving after transgressions are prone to depressive symptoms. The two transgressional motivations namely; revenge and avoidance were also highly correlated ($r=.64$, $p<.01$).

The **intrapersonal** constructs correlated with well-being. Self-esteem was significantly positively correlated with PWB ($r=.24$, $p<.01$), life satisfaction ($r=.32$, $p<.01$), PA ($r=.57$, $p<.01$) and social well-being ($r=.23$, $p<.01$). Self-esteem was found to have a direct relationship with life satisfactions (Grandey & Cropanzano, 1999). Ryff (1989) stated that happiness and self-esteem are parallel terms which are used as an index of global happiness or psychological well-being. Self-esteem and altruism were also found correlated ($r=.32$, $p<.01$) in the present study. Enhanced self-esteem among other findings was reported for retired altruistic adults (Midlarsky & Kahana, 1994).

Significant positive correlation was seen for resilience with PWB ($r=.16$, $p<.05$), life satisfaction ($r=.28$, $p<.01$), PA ($r=.22$, $p<.01$), social well-being ($r=.20$, $p<.01$), and altruism ($r=.26$, $p<.01$) whereas significant negative correlation was found with NA ($r=.20$, $p<.01$). PWB was reported to be influenced by resilience (Souri & Hasanirad, 2011). Many studies (Block & Kremen, 1996; Klohnen, 1996; Wolin & Wolin, 1993) confirmed high positive emotionality

in resilient individuals. Resilient individuals use positive emotions to achieve effective coping outcomes (Masten, 2001; Werner & Smith, 1992; Wolin & Wolin, 1993), creative exploration (Cohler, 1987), relaxation (Anthony, 1987), and optimistic thinking (Masten & Reed, 2002). Well-being facilitates the outcomes associated with resilience (Burns, Anstey & Windsor, 2010).

The construct, self-management showed significant positive correlation with PWB ($r=.19$, $p<0.01$) and a significant negative correlation with NA ($r=-0.16$, $p<0.05$). This indicates that individuals who are able to manage themselves are likely to possess positive feelings in life. This is because an individual would be at peace with oneself.

Overall findings of the present study, aligning with existing research confirmed intrapersonal and interpersonal factors as correlates of well-being. However, future research may focus on causal relationship by using stringent research methodology or qualitative research to get deeper insight in this area.

REFERENCES

- Anthony, E. J. (1987). Risk, vulnerability, and resilience: an overview. In *The Invulnerable Child* (ed. E. J. Anthony & B. J. Cohler), pp. 3–48. New York: Guilford.
- Argyle, M. (2001). *The Psychology of Happiness*. New York: Taylor & Francis
- Block, J., & Kremen, A.M. (1996). IQ and ego-resiliency: Conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, 70: 349–361.
- Brown, R.P. (2003). Measuring individual differences in the tendency to forgive: Construct validity and links with depression. *Personality and Social Psychology Bulletin*, 29: 759–771.
- Burns, R.A., Anstey, K.J., & Windsor, T.D. (2010). Subjective well-being mediates the effects of resilience and mastery on depression and anxiety in a large community sample of young and middle-aged adults. *Australian and New Zealand Journal of Psychiatry*, Early Online, 1–9.
- Bushy, A. (1998). Health issues of women in rural environments: an overview. *Journal of the American Medical's Women Association*, 53: 53-66.
- Chikani, V., Reding, D., Gunderson, P., & McCarty, C.A. (2005). Psychosocial work characteristics predict cardiovascular disease risk factors and health functioning in rural women the Wisconsin Rural Women's Health Study. *Journal of Rural Health*, 21: 295-302.
- Christopher, K.A. (2000). Determinants of psychological well being in Irish immigrants. *Western Journal of Nursing Research*, 22 (2): 123–140.
- Cohler, B.J. (1987) Adversity, resilience, and the study of lives. In the invulnerable child (ed. A.E. James & B.J. Cohler), pp. 363-424. New York: Guilford.
- Connor, K., & Davidson, J. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, 18: 76-82.
- Cullough, M.E., M., Root, L.M., & Cohen, A.D. (2006). Writing about the Benefits of an Interpersonal Transgression Facilitates Forgiveness. *Journal of Counselling and Clinical Psychology*, 74 (5): 887-897.

- Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49: 71-75.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125: 276-302.
- DiGiuseppe, R., & Froh, J. J. (2002). What cognitions predict state anger? *Journal of Rational Emotive & Cognitive Behavior Therapy*, 20: 133-150.
- Eberhardt, M., Ingram, D. & Makuc, D. (2001). Urban and Rural Health Chartbook. Health United States, 2001. Hyattsville, MD: *National Center for Health Statistics*.
- Frase, C.E., Smith, K.B., Judd, F., Humphreys, J.S. Fragar, L.J., & Henderson, A. (2005). *International Journal of Social Psychiatry*, 51: 340-349.
- Froh, J. J., Kashdan, T. B., Ozimkowski, K. M., & Miller, N. (2009). Who benefits the most from a gratitude intervention in children and adolescents? Examining positive affect as a moderator. *The Journal of Positive Psychology*, 4 (5): 408-422.
- Froh, J.J., Sefick, W.J. & Emmons, R.A. (2008). Counting Blessings in early adolescents: An experimental study of gratitude and subjective well-being. *Journal of School Psychology*, 46 (2), 213-233.
- Grandey, A.A. & Cropanzano, R. (1999). The Conservation of Resources Model Applied to Work-Family Conflict and Strain. *Journal of Vocational Behavior*, 54 (2): 350-370.
- Harvey D.J. (2007). Understanding Australian rural women's ways of achieving health and wellbeing - a metasynthesis of the literature. *Rural and Remote Health*, 7, 823. Available online: <http://www.rrh.org.au>
- Kahana, E., Bhatta, T., Lovegreen, L.D., Kahana, B. & Midlarsky, E. (2013). Altruism, Helping, and Volunteering Pathways to Well-Being in Late Life. *Journal of Aging and Health*, 25 (1): 159-187.
- Kashdan, T. B., Biswas-Diener, R., & King, L. A. (2008). Reconsidering happiness: The costs of distinguishing between hedonics and eudaimonia. *Journal of Positive Psychology*, 3: 219-233.
- Keefe, K., & Berndt, T.J. (1996). Relations of Friendship Quality to Self-Esteem in Early Adolescence. *Journal of Early Adolescence*, 16 (1): 110-129.
- Keyes, C.L.M. (1998). Social well-being. *Social Psychology Quarterly*: 121-140.
- Keyes, C.L.M., Shmotkin, D. & Ryff, C.D. (2002). Optimizing Well Being: The Empirical Encounter of Two Traditions. *Journal of Personality and Social Psychology*, 82 (6): 1007-1022.
- Keyes, C.L.M. (1998). Social Well-Being. *Social Psychology Quarterly*, 61 (2): 121-140.
- King, L.A., Hicks, J. A., Krull, J., & Del Gaiso, A. K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology*, 90: 179-196.
- Klohn E.C. (1996) Conceptual analysis and measurement of the construct of ego-resiliency. *Journal of Personality and Social Psychology*. 70: 1067-1079.
- Korman, A.K. (1976). Hypothesis of work behavior revisited and an extension. *Academy of Management Review*, 1: 50-63.
- Lakey, B., Tardiff, T.A., & Drew, J.B. (1994). Negative social interactions: Assessment and relations to social support, cognition and psychological distress. *Journal of Social and Clinical Psychology*, 15: 283-304.

na Suri
with Life
: Three
rnal of
rtbook.
istics.
(2005).
fits the
positive
scents;
School
Applied
(2005): 350-
health
alth, 7,
truism,
Aging
ss: The
positive
n Early
pirical
gy, 82
1-140.
nd the
gy, 90:
of ego-
cademy
ssment
rnal of

- Lahey, B., Tardiff, T.A., & Drew, J.B. (1994). Negative Social interactions: Assessment and relations to social support, cognition, and psychological distress. *Journal of Social and Clinical Psychology*, 13: 42-62.
- Leontopoulou, S. (2010). An exploratory Study of Altruism in Greek Children Relations with Empathy, resilience and Classroom Climate. *Scientific Research*, 1 (5): 377-385.
- Liang, Jersey; Krause, Neal M.; Bennett, Joan M. (2001). Social exchange and well-being: Is giving better than receiving? *Psychology and Aging* 16 (3): 511-523 .
- Linley, P.A., Maltby, J., Wood, A.M., Osborne, G., & Hurling, R. (2009). Measuring Happiness: The higher order factor structure of subjective and psychological well-being measures. *Personality and Individual Differences*, 47: 878-884.
- Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, 46: 137-155.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect Does happiness lead to success? *Psychological Bulletin*, 131: 803-855.
- Mann, M., Hosman, C.M.H., Schaalma, H.P., & De Vries, N.K., (2004). Self-esteem in an broad-spectrum approach for mental health promotion. *Health Education research*, 19: 357-372.
- Masten A.S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56: 227-238.
- Masten, A. S., & Reed, M.G.J. (2002). Resilience in development. *Handbook of positive psychology*, 74-88.
- McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2001). The gratitude questionnaire-six item form (GQ-6). McCullough, ME, Emmons, RA, & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82: 112-127.
- McCullough, M. E., Root, L. M. & Cohen, A. D. (2006). Writing about the Benefits of an Interpersonal Transgression Facilitates Forgiveness. *Journal of Consulting and Clinical Psychology*, 74 (5): 887-897.
- McCullough, M.E., Rachal, K.C., Sandage, S.J., Worthington, E.L., Brown, S.W., & Hight, T.L. (1998). Interpersonal forgiving in close relationships: II. Theoretical elaboration and measurement. *Journal of Personality and Social Psychology*, 75: 1586-1603
- Midlarsky E., Kahana E., editors (1994). *Altruism in later life*. Newbury Park, CA: Sage Publications.
- Misra, G. & Paranjpe, A.C. (2012). Psychology in Modern India. *Encyclopedia of the History of Psychological Theories*, 1-19.
- Morrow-Howell, N., Hinterlong, J., Rozario, P. A., & Tang, F. (2003). Effects of volunteering on the well-being of older adults. *Journal of Gerontology: Social Sciences*, 58B: S137-S145.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York: Oxford University Press.
- Probst, J.C., Laditka, S.B., Moore, C.G., Harun, N., Powell, M.P., & Baxley, E.G. (2006). Rural-urban differences in depression prevalence: implications for family medicine. *Family Medicine*, 38: 653-660.

- Probst, J.C., Laditka, S.B., Moore, C.G., et al. (2006). Rural-urban differences in depression prevalence: implications for family medicine. *Family Medicine*, 38 (9), 653-660.
- Reis, H. T., & Gable, S. L. (2003). Toward a positive psychology of relationships. In C. L. Keyes & J. Haidt (Eds.), *Flourishing: The positive person and the good life* (pp. 129-159). Washington, DC: American Psychological Association.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Ryan, R.M., & La Guardia, J.G. (2000). What is being optimized? Self-determination theory and basic psychological needs. In S.H. Qualls & N. Abeles (Eds.), *Psychology and the aging revolution How we adapt to longer life* (pp. 145-172). Washington DC: American Psychological Association.
- Ryff, C.D. (1989a). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57: 1069-1081.
- Ryff, C.D., & Keyes, C.L.M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69: 719-727.
- Sheldon, K.M., & Lyubomirsky, S. (2006). Achieving sustainable gains in happiness: Change your actions, not your circumstances. *Journal of Happiness Studies*.
- Singh, K., Kaur, J., & Singh, D. (in press). Well-being of rural Women in North India. *Journal of the Indian Academy of Applied Psychology*.
- Souri, H. & Hasanirad, T. (2011). Relationship between Resilience, Optimism and Psychological Well-Being in Students of Medicine. *Procedia- Social and Behavioural Sciences*, 30: 1541-1544.
- Toussaint, L. & Friedman, P. (2009). Forgiveness, Gratitude, and Well-Being: The Mediating Role of Affect and Beliefs. *Journal of Happiness*, 10(6): 635-654.
- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of Positive and Negative Affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54: 1063-1070.
- Werner E., & Smith R.S. (1992). Overcoming the odds: High risk children from birth to adulthood. Ithaca, NY: Cornell University.
- Witvliet, C.V.O., Ludwig, T.E., & Vander Laan, K.L. (2001). Granting forgiveness or harboring grudges: Implications for emotion, physiology, and health. *Psychological Science*, 12: 117-123.
- Wolin SJ, Wolin S. (1993). Bound and determined: Growing up resilient in a troubled family. New York: Villard.
- Zimmerman, S.L. (2000). Self-esteem, personal control, optimism, extraversion and the subjective well-being of Midwestern university faculty. Dissertation Abstract International B: *Sciences and Engineering*, 60(7-B), 3608.

APPENDIX-I

Description of the Tools Used in the Study

Domains	Sample items	Items From	Items	Item Number
WB	Psychological Well-being: Personal growth- "I am happy with my achievements." self-acceptance- "I like my behaviour/personality" Environmental mastery- "There exists opportunity for new experiences and gaining knowledge." SWLS, (Diener, Emmons, Larsen & Griffins, 1985) Purpose in life- "I understand my life's meaning." Autonomy- "I am free to live my life on my own terms" Positive Relations- "Maintaining close relationships has been difficult and frustrating for me".	Ryff's Scale of Psychological Well-being (Ryff and Keyes, 1995)	7-Jan 8*	T= 8 Items P= 7 Items N= 1 Item
INTRA.	Self-esteem "I take a positive attitude towards myself." "I live my life with self-respect." "I believe in myself."	Self Esteem Scale, Rosenberg (1965)	30, 31, 20	T= 3 Items P= 3 Items
WB	Subjective Happiness: "Usually, I am happy in my life." "I am happy when I compare myself with my colleague."	(SHS), Lyubomirsky & Lepper (1999)	15, 16	T= 2 Items P= 2 Items
WB	Life Satisfaction "I am completely satisfied in my life" and "I am satisfied with my living style."	SWLS, (Diener, Emmons, Larsen & Griffins, 1985)	17, 18	T= 2 Items P= 2 Items
WB	Positive Affect (PA): (used as statement not adjectives) "I feel joyful." "I feel energetic in my life."	PANAS, (Watson, Clark, & Tellegen, 1988)	19, 23	T= 2 Items P= 2 Items
WB	Negative Affect (NA): "I usually feel tensed and anxious." "I feel lonely." "I have headaches because of stress and tension."	PANAS, (Watson, Clark, & Tellegen, 1988)	21, 22, 24 25, 27 & 28	T= 6 Items P= 6 Items

WB	Social Well-Being: "There are people in my life who really care about me." "The World is a good place to stay." "I feel close to other people in the society."	Social Well-being (Keyes, 1988)	9, 10, 11 12*, 13, 14, 26	T= 7 Items P= 6 Items N= 1 Items
INTRA.	Resilience: "I learn from my mistakes and forget about them." "I am always optimistic about my future." "When things go wrong in my life, it generally takes me a long time to get back to normal."	(CD-RISC). Connor & Davidson, (2003) & Self Developed	46, 48, 49, 29, 32, 33*	T= 6 Items P= 5 Items N= 1 Items
INTRA.	Altruism includes healthy relations with others and helping others: "I have a good relationship with my family members", "I always put myself in others shoes." "Every month, I donate some money."	Self developed	34, 35, 36, 38, 39, 40, 41	T= 7 Items P= 7 Items
INTRA.	Gratitude: "I am thankful to a lot of people in my life." "I have a lot to thank for in my life."	(GQ-6), McCullough, Emmons, and Tsans (2001)	42, 43	T= 2 Items P= 2 Items
INTRA.	Forgiveness: "However, some people have hurt me but I have forgiven them."	Self Developed	47	T= 1 Items P= 1 Items
INTRA.	Self-management "I understand and manage my emotions very well." "If something goes wrong, I keep cursing myself for it."	Self Developed	37, 45*	T= 2 Items P= 1 Items N= 1 Items
INTER.	Avoidance: "I try to keep distance from the people who hurt me." "I withdraw from the people who hurt me."	TRIM -12) (McCullough, et.al.(1998)	50, 53	T= 2 Items P= 2 Items
INTER.	Revenge: "I punish the people who hurt me." "I am going to get even." "I like to see people who hurt me, in suffering."	TRIM -12) (McCullough, et.al. (1998)	44, 51, 52	T= 3 Items P= 3 Items

Note: WB= Well-being, Intra=Intrapersonal factor, Inter=Interpersonal factors; T=total, P=positive & N=negative items; *Negative Items (Reversed scored).

ii) Construct definition & some of the items were borrowed from the above mentioned scales and others were self developed questions.

Keywords: Problem

Co and red Cronkit stressfu between its own accordi

* De
** De
*** De

COPING BEHAVIOUR AMONG ARMY PERSONNEL

Shivalika Sharma, Anup Sud** and Gayatri Raina****

ABSTRACT

The present study examines the coping behaviour among army personnel of officer ranks and other ranks for psychosocial stressors and life satisfaction. The sample comprised of 150 army personnel (75 officers ranks and 75 other ranks). The correlation analysis on all the variables has been done. The analysis revealed that for army personnel of officer ranks overall coping behaviour, problem focused coping and emotion focused coping have been found to be significantly and negatively related to psychosocial stressor of strained interpersonal relationships only. Overall coping behaviour and emotion focused coping have been found to be significantly and positively related to life satisfaction for army personnel of officer ranks. In army personnel of other ranks overall coping behaviour, problem focused and emotion focused coping have been found to be significantly and positively related to life satisfaction.

Keywords: Coping behaviour, Emotion focused coping, Interpersonal relationships, Problem focused, and Psychological stressor

INTRODUCTION

Coping consists of the cognitions and behaviour that people use to assess and reduce stress and to moderate the tension that accompanies it (Billings, Cronkites, & Moos, 1983). It follows that the relationship between coping and stressful event represents a dynamic process. Coping is a series of transactions between a person who has a set of resources, and particular environment with its own resources, demands and constraints (Lazarus & Launier, 1987). Thus, according to Taylor (2006), coping is a dynamic process and not an onetime

* Department of Psychology, Himachal Pradesh University, Shimla.

** Department of Psychology, Himachal Pradesh University, Shimla.

*** Department of Psychology, Himachal Pradesh University, Shimla.

ii) Construct definition & some of the items were borrowed from the above mentioned scales and others were self developed questions.

action that an individual takes. It is a set of responses, occurring over a period of time, by which environment and person influence each other. A stressful circumstance can be rendered considerably less stressful if you know how to cope with it (Blonna, 2005; Corbin and others, 2006; Greenberg, 2006). According to Santrock (2006), coping involves managing taxing circumstances, expanding effort to solve life's adaptational outcomes.

People using problem focused coping try to deal with the causes of their problem, by finding out information on the problem and learning new skills to manage the problem. Problem focused coping is aimed at changing or eliminating the source of the stress. Emotion focused coping on the other hand involves releasing pent-up emotions, distracting oneself, managing hostile feelings mediating or using systematic relaxation procedures. Emotion focused coping is oriented toward managing the emotions that accompany the perception of stress (Brannon, 2009).

Psychosocial stressors refer to acute or chronic events of psychological or social origin which challenge the homeostatic states of biological systems. Psychosocial stressors include, but are not limited to, exposure to adverse environments and life experiences such as natural disasters, crowding or isolation, relative position in a social hierarchy, stigma and discrimination, catastrophic traumatic events (*e.g.* war and terrorism), loss of job, disease, family violence, deprivation, adverse social environment or situations.

Psychosocial stressors involve stressors from interpersonal relationships, arguments or conflicts with family members, neighbors, friends, employee or other people around us. If experience with family and friends are supportive and constructive, the individual who is exposed to stress will be able to react favourably to stressors, while the individual who has primarily negative and non supportive experiences will find stressors to be more disruptive and upsetting.

Research studies have reported that just living in a military environment can be overwhelming as it impinges on an individual's overall functioning and tests human limits (Cotton, 2001 & Moore, 2006). In Indian army, unfortunately, occupation related stress and associated hazards are increasing day by day. Various statistical surveys show that the prevalence of stress among army personnel has been causing harmful impact on the society, the warning that cannot be ignored. Every third day a soldier commits suicide and every tenth day another is killed by a colleague running in mental illness, resulting in suicide and killing of fellow soldiers have caused an alarm among the army force (Tribune News, 2007).

Researchers have expressed that stress is a part of human life from which no human being can escape (Cooper & Dewe, 2004; Jones & Bright, 2001; Steptoe, 2000; Wong, 2006). Experience of stress varies among individuals and is inevitable at sometime or other in one's life (Lazarus & Cohen, 1977; Taylor, 2006).

Having effective coping mechanisms may be one of the important predictors of life satisfaction across the life span. Life satisfaction is an attribute of persons' evaluations of social support, health, own thoughts and feelings and methods of dealing or coping with stress.

Life satisfaction was positively correlated with greater use of cognition self-control coping and negatively correlated with maladaptive escapism and solace seeking (Lewinsohn, Render & Seeley, 1991). Perception of control and future orientation (Dubey & Agarwal, 2004), using planning and reinterpretation of situation may be an important way to improve life satisfaction (Lewinshon et al, 1991).

Kampfe, Mitchell, Bayless & Saucess (1995) observed a significantly more use of problem focused and seeking – social support strategies than of wishful thinking or avoidance strategies. Problem focused and seeking social support strategies have been found to positively related to various measures of psychological well-being.

METHOD

Sample

A sample of 150 equal numbers of army personnel from officer ranks and other ranks (75 each) were selected for the present purpose.

Tools

The tools used in the present study are as follows:

- (a) **Brief Cope:** The brief cope measure was an abbreviated version of the Cope inventory developed by Carver, Scheier & Weintraub, (1989). It consists of 28 items, having divided into two sub scales, problem focused coping and emotion focused coping. It is a 4 point Likert scale ranging from 1(I haven't been doing this at all) to 4 (I have been doing this a lot). Alfa coefficients ranging from .41 to .85 for the sub scale and .86 for the total instrument have been observed. Estimates for test – retest reliability of the Cope scale ranging from .46 to .86 and .42 to .89 (Carver, Scheier & Weintraub, 1989). Further, the convergent and discriminant validity of the Cope has been reported.
- (b) **ICMR Psychosocial Stress Scale:** Designed by "Indian Council of Medical Research (ICMR)" New Delhi, the scale consists of 40 items which covers following areas: Strained interpersonal relationship, excessive responsibilities, financial constraints, marriage related stress, health related problems, adverse situations and perceived threat. The reliability of the scale has been establish through Cronbach-Alpha ($r=.88$), split half ($r=.88$), test-retest ($r=.72$) and internal consistency

($r=.65$) method. Internal consistency of the tool on its seven subscale ranged from .24 to .77 ($p<.05$). This further established the content validity of the measure.

- (c) **Life Satisfaction Scale:** The life satisfaction scale, developed by Alam and Shrivastava, (1971), consists of 60 items related to six areas, viz, health, personal, economic, marital, social and job. The responses are to be given in yes or no format, indicating satisfaction or dissatisfaction. There is no time limit yet it takes about 20 minutes to complete the questionnaire. Reliability co-efficient was obtained as 0.84.

Procedure

A set of three questionnaires namely Brief cope, psychosocial stressors and life satisfaction were distributed to the army personnel. All the army personnel were asked to fill each questionnaire carefully after reading the instructions given on the top of the each questionnaire.

RESULTS AND DISCUSSION

Correlation analysis on all the variables was computed separately for army personnel of officer ranks and in other ranks. The results are reported in Table 1.

Table1: Correlation among Coping Behaviour (Problem Focused Coping and Emotion Focused Coping), Psychosocial stressors and Life Satisfaction among army personnel of officer ranks and other ranks

S. No.	Army Personnel of Officer's rank		Army Personnel of Other ranks	
	Variable Life-satisfaction	Psychosocial -satisfaction	Life Stressors	Psychosocial Stressors
1 Coping Behaviour	-.064	.300**	.118	.316**
2 Problem Focused Coping	-.033	.213	.156	.284*
3 Emotion Focused Coping	-.096	.306**	.041	.302**
4 Psychosocial Stressors	1	-.333**	1	-.308**
5 Life-satisfaction		1		1

** $p<.01$, * $p<.05$

Vide Table 1, Pearson co-efficients of correlation indicate that in the present study:

- (a) For army personnel of officer ranks (Table-1) life satisfaction has been found to be significantly and positively related to overall coping behaviour ($r = .300$, $p<.01$) and emotion focused coping ($r = .302$, $p<.01$). No such relationship was evident with regard to problem focused coping.

- (b) In other ranks (Table -1) life satisfaction has been found to be significantly and positively related to overall coping behaviour ($r = .316$, $p < .01$), problem focused coping ($r = .284$, $p < .05$) as well as emotion focused coping ($r = .302$, $p < .01$).
- (c) A negative and significant correlation was obtained between the coping behaviour and psychosocial stressors of both types of army ($r = -.333$, $p < .01$ for officer's rank and $r = -.308$, $p < .01$ for other rank) personnel in the present study.

However, overall coping behaviour and its sub scales (problem focused coping and emotion focused coping) were not related to any kind of psychosocial stressors of present study for the army personnel of other ranks. In case of army personnel of officer ranks only strained interpersonal relationship was found to be negatively related to the use of problem focused coping as well as emotion focused coping behaviour. Perhaps army officers under stress related to interpersonal relationship did not use any of coping mechanism (problem focused coping and emotion focused coping).

Hendix, Steel and Schultz (1987) proposed that since families are the main supporting agent in an individual's life when such an agent is strained, it in turn adversely affects the coping capacity of the individual. Interpersonal relationships at work constitute the day to day interaction between co-workers, or managers and employees. These relations are natural part of the work environment and are usually pleasant and creative, but sometimes are the source of tension and frustration (De Dreu, VanDierendonck and De Best- Waldhober, 2003), thus perhaps the negative influence of strained interpersonal relationship is so great for army personnel of officer ranks that it may reduce their will to cope with these situations. Because of their seniority they may have had so much exposure to these threats over the years that they start accepting them as natural part of their life. They are no longer perceptive about the coping mechanism they may use, or may be because of their senior position, such threat cannot harm them any more professionally or otherwise, so the use of any type of coping is less. However, lack of supportive evidence highlights the need of much further research.

While among army personnel of other ranks (Table-1) life satisfaction has been found to be significantly and positively related to overall coping behaviour, problem focused coping as well as emotion focused coping. For army personnel of officer ranks (Table - 1) life satisfaction has been found to be significantly and positively related to overall coping behaviour and emotion focused coping and not with regard to problem focused coping.

Since coping involves managing taxing circumstances, expanding effort to solve life's problems, seeking to master or reduce stress, coping is central to the stress process and its adaptational outcomes (Santrock, 2006). A stressful

circumstance can be rendered considerably less stressful if one knows how to cope with it (Blonna, 2005; Corbin, Welk, & others, 2006; Greenberg, 2006). Sharon, Hazel & Rebeca (2004) found that people with hope had greater coping efficacy and use more problem focused coping. Anubhuti and Adesh (2007) observed that active coping strategies were effective in promoting the level of life satisfaction. For army personnel of other ranks (Table-1) life satisfaction has been found to be significantly and positively related to overall coping behaviour, problem focused coping as well as emotion focused coping. Probably the army personnel of other ranks show more satisfaction with life when they are able to use both problem focused coping as well as emotion focused coping behaviours. Since they can't say no to the decisions made by their senior officers (Shaim, 1998) this may create undue pressure on them and to deal with such stresses, they may use all possible strategies to be satisfied with life of army personnel

For army personnel of officer ranks a significant and positive relationship has been emerged between life satisfaction and emotion focused coping i.e. high emotion focused coping leads to high satisfaction with life for them. Probable reasons for this may be that the personnel on higher ranks have always confidential matters to handle and they have more attitude, they lack tendency to seek help from others, cannot discuss all the matters with others and they are always at the 'decision- making' positions where they can't show their inabilities. Carver, Scheier and Weintraub (1989) observed that individuals commonly use venting (or releasing strong feeling about a stressful situation) to help to regulate their emotions. Emotion focused coping can be helpful because it temporarily reduces the threat and allows individuals to recharge by recognizing, processing and expressing their emotions (Austenfeld & Stanton, 2004).

REFERENCES

- Alam, Q.G. and Srivastava, R. (1971). *Manual for Life Satisfaction Scale*. National Psychological Corporation, Agra.
- Anubhuti, D. & Adesh, A. (2007). Coping strategies and life satisfaction: chronically ill patients' perspectives. *The Journal of Indian Academy of Applied Psychology* 33(2): 161-168.
- Austenfeld, J.L. & Stanton, A.L. (2004). Coping through emotional approach: A new look at emotion, coping and health related outcomes. *Journal of Personality*, 72 1335-1363.
- Billings, A.G., Cronkite, R.C., & Mosses, R.H. (1983). Social environmental factors in unipolar depression. Comparison of depressed patients and non depressed controls. *Journal of Abnormal psychology*, 92: 119-133.
- Blonna, R. (2005). *Coping with stress in a changing world*. (3rd Ed.), NY: Mc Graw-Hill
- Brannon, L. (2009). Feist, Jess *Health Psychology* (7th ed.). Wadsworth Cengage Learning.
- Carver, C.S., Scheier, M.F. & Weintraud, J.K. (1989). Assessing Coping Strategies. A theoretically bases approach. *Journal of personality and Social Psychology*, 56(2): 267-283.

- Cooper, C.L. & Dewe, P.J. (2004). *Stress: A Brief history*. Oxford, UK: Black well Publishing.
- Corbin, C.B., Welk, G.J., Corbin, W.R. & Welk, K.A. (2006). *Concept of Fitness and Wellness* (VI Eds.). NY: McGraw- Hill.
- Cotton, A. (2001). Non Operational Military Stress Management in the ADF: Where have we been, and where are we going? In G. Kearney, M. Creamer, R. Marshall & A. Groyne. *The Management of stress in the Australian Defense Force*. pp. 1-5 common wealth, Australia.
- De Dreu C.W.K., Van Dierendonck, D and De Best- Waldhober, M. Conflict at Work and Individual Well- Being in *The Handbook of Work & Health Psychology*. (pp. 495-515) Schabraczy M.J., Winhubst J.A.M., C.L. Cooper, Editors, 2003, Jon Wiley & Sons Ltd., West Sussex, England.
- Dubey, A. & Agarwal, A. (2004). Feelling well inspite of chronic illness. *Psychology Studies*, 49. 65-68.
- Greenberg, J.S. (2006). *Comprehensive Stress Management*. (IXeds.). NY: Mc Graw-Hill.
- Hendix. W.H., Steel, R.P., & Schultz, S.A. (1987). Job stress and life stress: Their causes and consequences. *Journal of social Behavior and Personality*, 2, 291-302.
- Jones, F. & Bright, J. (2001) *Stress : Myth, Theory and research*. Harlow, England: Prentice-Hall.
- Kampfe, Mitchell, Boyless & Saucers, (1995). Coping with examination stress: Resources, strategies, outcomes. *Anxiety, Stress and Coping: An International Journal*, 279-298.
- Lewinsohn, P.M., Render, E., & Seeley, J.R. (1991). The relationship between life satisfaction and psychosocial variables: New perspective. In : Strack F, Argyle M, Schwarz N, (eds). *Subjective well being: An interdisciplinary perspective*. New York: Pergamon Press; p. 193-212.
- Lazarus, R.S. & Launier, R. (1978). Stress related transaction between person and environment. In Pervin, Z. A. & Lewis, M. (Eds.). *Perspectives in international psychology*. New York. Plenum.
- Lazarus, R.S. & Cohen, J.B. (1977). Environmental stress. In Altman, I. & Wohlwill, J.F. (Eds). *Human Behavior and Environment*, Vol. 2. Plenum press, New York.
- Moore, B. (2006). *Monitor on psychology*. Vol. 37, No.4.
- Santrock, J.W. (2006). Tools for coping with life's stressors. *Life Span Development*. (10th Eds.) New York: Mc Graw-Hill.
- Shalim, Avi. (1998). *Collusion Across the Jordan*. New York Columbia University Press.
- Sharon, D.B., Hazel, M.P., & Rebecca, R.S. (2004). Hope and life satisfaction in Black College Students Coping with Race- Related stress. *The Journal of Black psychology*, 30(2): 208-228.
- Steptoe, A. (2000). Stress effects, overview. *Encyclopedia of Stress*. Vol. 3, N-Z, Index.
- Taylor, S.E. (2006). *Health psychology*. Sixth edition. University of California Los Angeles.
- Tribune News, editorial (05-07-2007). Soldierin stress, Ignore symptoms to court disaster. <http://www.tribuneindia.com/2007/2007/0705/edit.htm#1>. Retrived on 24 Jan, 08.
- Wong, P.T.P., & Wong, L.C.J. (2006). *Handbook of Multicultural Perspectives on Stress and Coping*. Springer Science + Business Media, Inc, U.S.A.

PSYCHOLOGICAL PREDICTORS OF MENTAL HEALTH OF SCHOOL TEACHERS

Mansavee Dubey and G. S. Gujar***

ABSTRACT

The present study aspired to investigate whether Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers. It was hypothesized that Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills will be significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers. A purposive sample of 400 3rd Grade School Teachers 200 from Government Schools and 200 from Private Schools from Rajasthan State was selected. The Predictor Variables were measured by Emotional Intelligence Scale (EIS) (Hyde, A., Pethe, S. and Dhar, U., 2001), NEO-PI (R) (McCrae & Costa, 2003), Presumptive Stressful Life Events Scale (Singh et. al, 1981) and Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1986) whereas the Criterion/Outcome Variables were measured by Mental Health Inventory (MHI) (Singh, J. and Srivastava, A.K., 1983). The Correlational Research Design along with Regression Model was employed. The Multiple Regression Analysis was computed to investigate whether Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in

* Career Counsellor, 100-A park view lane gyankhand 4 indirapuram Ghaziabad.

** Associate Professor, R.P. Govt. P. G. College, Alwar.

Government and Private School Teachers. It was empirically proved that Emotional Intelligence was a significant positive predictor whereas Presumptive Life Stress was a significant negative predictor of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers. The results are interpreted in the light of existing researches.

Keywords: Emotional intelligence, Personality, Presumptive life stress, Coping skills, Positive self-evaluation, Perception of reality, Integration of personality, Autonomy, Group-oriented attitudes, Environmental mastery, and Mental health

INTRODUCTION

Teaching is commonly recognized as one of the most stressful occupations in our nation. Teacher stress results in such consequences as early retirement, long and excessive absences, new teachers leaving during training, and an increase in teachers leaving the profession within their first five years (Bachkirova, 2005). In recent years, professional satisfaction has been decreasing while job pressure has been on a steady rise for teachers. These issues have raised many questions about the growing problem of teacher stress (Guglielmi & Tatrow, 1998).

It has been reported that teacher stress affects the learning environment and ultimately prevents achievement of the teacher's educational goals. This leads to disinterest, negligence, bitterness, and absenteeism among teachers, and can result in teachers leaving the profession (Guglielmi & Tatrow, 1998). In North Carolina about 28% of teachers who resign each year leave the profession due to a career change, health, being dissatisfied with teaching, teaching at a private or charter school, or for unknown reasons (Annual Report of the Reasons Teachers Leave the Profession, 2007). Although leaving for a private or charter school is listed above, it is rare that this happens because private schools require most teachers to hold an advanced degree and teachers usually are not compensated as well. In fact, half of private schoolteachers who resign each year, do so, to teach at a public school (Miner, 2009). Increasing attention has been given to understanding teacher stress to further study this alarming phenomenon (Blasé, 1982).

Even though stress is quickly becoming a recognized occupational hazard of the teaching profession (Pettegrew & Wolf, 1982), little theoretical work on teacher stress has been attempted or completed (Blasé, 1982), and recently there have been no studies that have focused specifically on stress within the primary school environment. The few studies that have been tried lacked subjects' perceptions (Blasé, 1986) and have been flawed in other areas. Some studies have been focused on large urban school districts, which is not representative of smaller districts in which the majority of teachers are employed. Also, stress has not been dealt with as an organizational matter; meaning ways to lessen job related stress have not been discovered (Bacharach, Bauer, & Conley, 1986).

Two types of stress can ultimately affect teachers. Task based stress, such as dealing with disruptive students, refers to problems that are associated with a variety of specific tasks that teachers must perform in their teaching role. Role based stress, such as an absence of sufficient resources to perform adequately, refers to how teachers' expectations of their role fit in with the actual work-related responsibilities needed to fulfill their role (Pettegrew & Wolf, 1982). Stress within teaching is driven by the organizational factors related to the way in which teachers are expected to work (Hepburn & Brown, 2001). Organizational factors that contribute to teacher stress can include unreasonable directed time budgets, excessive paperwork, unrealistic deadlines, and intimidating inspection regimes (Hepburn & Brown, 2001). A teacher's personality is a factor when explaining the amount of stress that is present.

Teachers' skills, motives, and perceptions of their work environment determine the amount of stress that may take place (Guglielmi & Tatrow, 1998). A teacher who does not have a conflict between personal values and those of educational authorities, has a high ambition to succeed professionally, and is not easily upset or excited; tend to experience the least amount of stress (Bachkirova, 2005). Teacher stress is closely linked to strain and burnout. Strain is any unpleasant behavioural, psychological, or physiological outcome in a teacher (Sutton, 1984). In general, strain is the result of an interaction between a person and their environment. Strain is measured in terms of physiological dysfunction, psychological dysfunction, or behavioural dysfunction (Guglielmi & Tatrow, 1998).

Teacher stress can be caused from a variety of situations. Stress often comes about when teachers have difficult negotiating various aspects of interactions with students (Hepburn & Brown, 2001) or from any circumstances that are considered too demanding, depriving of time, and interfering with instruction (Blasé, 1986). Stress can best be explained by categorizing factors into first and second order stressors. First order stressors directly interfere with teacher effort and can include student apathy, student disruption or discipline, poor student attendance, high student to teacher ratios (large classes), paperwork, prep work, irresponsible colleagues, obtrusive supervisors, lack of effective leadership such as assistant principals or principals, and seemingly non-supportive parents. Stressors that occur most frequently tend to be organizational issues dealing with students, administration, other teachers, and other work relationships (Blasé, 1986). Second order stressors do not interfere directly with teacher effort and can include issues such as low salary, emotional fatigue, frustration, helplessness, stagnation, boredom, and loss of motivation or enthusiasm (Blasé, 1986).

Stress among teachers can also be grouped into three categories: role demands, instructional problems, and interpersonal relationships (Sutton, 1984). Role related stress is said to be the difference between teachers' role expectations

and their actual experiences within that role (Pettegrew & Wolf, 1982). Role demand stressors include ambiguity, overload, conflict (Sutton, 1984), preparedness, and non-participation (Pettegrew & Wolf, 1982). Organizational characteristics such as policies, structure, and processes can also be categorized as role demand stressors (Bacharach, Bauer, & Conley, 1986). Instructional problems or task stress identifies problems associated with a variety of specific tasks that teachers must perform in their teaching role (Pettegrew & Wolf, 1982). Instructional problems can include difficulties with student discipline, competence inappropriate procedures for student placement, instruction, inadequate standardized tests, grading systems (Sutton, 1984), notification of unsatisfactory work performance, being physically threatened by students (Pettegrew & Wolf, 1982) and sparse or dangerous working conditions (Bacharach, Bauer, & Conley, 1986).

Interpersonal relationships refer to relationships teachers have with fellow professionals or community members within the educational environment. Network interaction and supervision may also fall into this category (Bacharach, Bauer, & Conley, 1986). The most common stressors in this group are conflict with other staff members, and a lack of social support from supervisors and coworkers (Sutton, 1984). Causes of teacher stress can also be broken down into environmental and individual stressors. Most stressors can be found in the work environment and include unfavourable working conditions, heavy workloads, organizational problems, and paucity of resources, lack of support and autonomy, and decision making.

The work environment can also include physical stressors such as task related noise, crowding, the size of the classroom and or school, safety or youth violence, as well as administrative pressures such as support from managers and role ambiguity (Hastings & Bham, 2003). Individual characteristics include the unique attributes of teachers such as personality, age, gender, demographic background, the ability to establish and maintain supportive networks, cognitive evaluation of stressors, the ability to cope, type of teacher, and job dissatisfaction (Guglielmi & Tatrow, 1998). Individual stress also can be associated with the compatibility between personal and educational values, ambition to succeed, sensitivity threshold, competitiveness, multiple roles for women teachers (such as parent, caretaker, homemaker, and teacher), and perfection (Bachkirova, 2005).

The prime objective of the present study was to investigate whether Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Master dimensions of Mental Health in Government and Private School Teachers.

Hypothesis

It was hypothesized that Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills will be significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers.

METHOD

Sample

Initially, around 459 3rd Grade School Teachers were contacted and later on a purposive sample of 400 3rd Grade School Teachers (age range 35-50 years) with balanced number of males and females was retained. Out of these 400 School Teachers; 200 of them were working in Government Schools and the remaining 200 of them were employed with Private Schools. These School Teachers were sampled from various Government and Private Schools of Rajasthan State irrespective of caste, creed and socio-economic status.

Tools

Following tools were used in the present investigation—

1. **Emotional Intelligence Scale (EIS) (Hyde, A., Pethe, S. and Dhar, U., 2001):** The Emotional Intelligence Scale was developed and standardized by Anukool Hyde, Sanjyot Pethe and Upinder Dhar (2001). The scale measures ten different aspects of the Emotional Intelligence orientation. A summated total score is derived. High score in each of the sub scale as well as the total score indicate high level of emotional intelligence and are likely to be high performers. Self-awareness, empathy, self-motivation, emotional stability, managing relations, integrity, self-development, value orientation, commitment and altruistic behaviour are the ten components of the scale. The reliability of the scale was determined by calculating reliability co-efficient on a sample of 200 subjects. The split half reliability coefficient was found to be 0.88. Besides face validity, as all items were related to the variable under focus, the scale has high content validity. It is evident from the assessment of judges / experts that items of the scale are directly related to the concept of emotional intelligence.
2. **NEO-PI (R) (McCrae & Costa, 2003):** For measuring personality, it was decided to administer NEO- Five Factor Inventory by Paul T. Costa & Robert R. McCrae which was published in 1992, though the NEO Five-Factor Inventory (NEO-FFI) is a shortened version of the NEO PI-R, designed to give quick, reliable and valid measures of the five domains of adult personality. The 60 items are rated on a five

point scale. The NEO-FFI has a grade six reading level. The NEO-FFI scales show correlations of .75 to .89 with the NEO-PI validity factors. Internal consistency values range from .74 to .89.

3. **Presumptive Stressful Life Events Scale (Singh et al, 1981)**
Most of the investigators in the field of life events have made use of 'Social Readjustment Rating Scale' (Holmes and Rahe (1967) or 'Scaling of Life events' (Paykel, 1971). In India also mainly these two scales have been used with local transactions but without making any major modification to suit the Indian Population. Because of cultural difference and non-validation of these scales in our population, the results obtained by these studies are thought to be unreliable. To overcome this difficulty and also in view of the various shortcomings of the existing life event scales Singh et al (1981) constructed this new 'Presumptive Stressful Life Events Scale' suitable for the Indian population and published in Indian Journal of Psychiatry (1984).
4. **Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1986):** This revised test was published in 1985; it is derived from cognitive - Phenomenological theory of stress and coping that is articulated in Stress, Appraisal and Coping (Lazarus and Folkman, 1984) and elsewhere (Lazarus, 1981; Lazarus and Launier, 1978). The Ways of Coping Questionnaire is based on a definition of coping as the cognitive and behavioural efforts to manage specific external or internal demands appraised as taxing or exceeding the resource of the individual. This definition has four key features: (1) it is process oriented; (2) it speaks of management rather than mastery; (3) it makes no a priori judgment about the quality of coping process; and (4) it implies stress-based distinction between coping and automatic adaptive behaviours. The Ways of Coping Questionnaire was developed to provide researchers with a theoretically derived measure that could be used to explore the role of coping in the relationship between stress and adaptational outcomes. The Ways of Coping Questionnaire consists of 50 items (plus 16 fill items) within eight empirically derived scales (Folkman & Lazarus, 1988). Because the Ways of Coping Questionnaire measures coping process, which, by definition, is variable, traditional test-retest estimates of reliability are inappropriate. Reliability can be evaluated, however, by examining the internal consistency of the coping measures, estimated with Cronbach's coefficient alpha. Internal consistency estimates of coping measures generally fall at the low end of the traditionally acceptable range. Evidence of construct validity is found in the fact that the results of the studies are consistent with theoretical predictions, namely, that (1) Coping consists of both problem focused and emotion focused strategies and (2) coping is a process.

5. **Mental Health Inventory (MHI) (Singh, J. and Srivastava, A.K., 1983):** The Mental Health Inventory (MHI) has been designed to measure mental health (positive) of normal individuals. The salient feature of the scale lies in inclusion of the symptoms of psychological well-being or positive symptoms of mental health along with absence of mental ill health. For the purpose of developing the inventory, Mental Health was operationally defined as the person's ability to make positive self – evaluation, to perceive the reality, to integrate the personality, autonomy, group-oriented attitudes and environmental mastery. The MHI consists of six dimensions which are as follows: Positive Self-evaluation (PSE), Perception of Reality (PR), Integration of Personality (IP), Autonomy (AUTNY), Group-oriented Attitude (GOA) and Environmental Mastery (EM). The reliability of the inventory was determined by split-half method using odd-even procedure which was 0.73. The construct validity of the inventory is determined by finding coefficient of correlation between scores on Mental Health Inventory (MHI) and General Health Questionnaire (GHQ) (Goldberg, 1972). It was found to be .54. The Inventory was also validated against Personal Adjustment Scale (a sub-scale of S.D. Inventory) developed by Pestonjee (1973) which yielded a positive correlation of .57 revealing moderate validity.
6. **Happiness Scale (Argyle and Hills, 2002):** The Oxford Happiness Questionnaire short form (Hills & Argyle, 2002) is an 8-item measure of happiness. They intended to be a replacement for the full version when administration time is short. They provided initial evidence for the psychometric properties of both the 29-item and the 8-item measures. Moreover, both versions of the measure have demonstrated validity with measures of happiness, personality, self-esteem, satisfaction, life orientation, and life regard (Hills & Argyle, 2002), and measures of religiosity (Lewis, Maltby, & Day, 2005). The results for the full and shorter versions were significantly and strongly correlated, $r(168)=0.93$, $P<0.001$ (Hills and Argyle, 2002).

Predictor Variables

- Emotional Intelligence
- Personality
- Presumptive Life Stress
- Coping Skills

Criterion/Outcome Variables

- Positive Self-evaluation (Mental Health)
- Perception of Reality (Mental Health)

RESULTS AND DISCUSSION

The Research Design for the proposed study was a Correlational one along with Regression Model as it was an exploratory research. The Multiple Regression Analysis was computed to investigate whether Emotional Intelligence, Personality Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation, Perception of Reality, Integration of Personality, Autonomy Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers.

Table 1: Coefficients of Regression Model: Emotional Intelligence, Personality Presumptive Life Stress and Coping Skills on Positive Self-evaluation (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F	df1	df2	Sig. F Change
1	.930 ^a	.865	.860	2.994	.865	164.015	15	384	.000

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22055.461	15	1470.364	164.015	.000 ^a
	Residual	3442.499	384	8.965		
	Total	25497.960	399			

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

b. Dependent Variable: PSE

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1	(Constant)	-83.835		-16.417	.000
	EI	1.172	.028	41.510	.000
	N	.114	.064	1.793	.074
	E	.009	.040	.219	.821
	O	-.010	.039	-.253	.804
	A	.031	.032	.955	.341
	C	-.002	.031	-.081	.931
	PLS	-.061	.012	-5.213	.000

CC	-.028	.072	-.008	-.385	.701
Distc	-.010	.079	-.004	-.131	.896
SC	.048	.093	.010	.514	.608
SSS	-.029	.053	-.013	-.549	.583
AR	.040	.095	.010	.415	.678
EA	-.023	.056	-.011	-.411	.681
PPS	-.060	.062	-.028	-.963	.336
Po R	.074	.057	.042	1.285	.199

a. Dependent Variable: PSE

The Multiple Regression Analysis was computed through SPSS 17.0 to investigate whether Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills are significant predictors of Positive Self-evaluation dimension of Mental Health in Government and Private School Teachers. The Table 1 depicts the predictors of Positive Self-evaluation dimension of Mental Health in Government and Private School Teachers. The R^2 value is .865 which explains 87% of variance in Government and Private School Teachers. The value of adjusted R^2 is .860 which explains 86% of variance in Government and Private School Teachers. The F ratio is 164.02 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant $\hat{a}$ coefficient is -83.84 and Standardized $\hat{a}$ coefficient of Emotional Intelligence (EI) is .874 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 41.51 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence is a significant positive predictor of Positive Self-evaluation dimension of Mental Health. Therefore, as Emotional Intelligence increases, Positive Self-evaluation dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized $\hat{a}$ coefficient of Presumptive Life Stress (PLS) is -.116 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -5.21 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Positive Self-evaluation dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Positive Self-evaluation dimension of Mental Health decreases in Government and Private School Teachers.

It is again observed that the Standardized $\hat{a}$ coefficients of Personality factors— Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions – Confrontive Coping (CC), Distancing (Distc), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are .036, .004, -.005, .019, -.002, -.008, -.004, .010, -.013, .010, -.011, -.028 and .042 respectively which are not significant

even at 0.05 level of confidence. Therefore, Personality factors – Neuroticism Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving & Positive Reappraisal are not significant predictors of Positive Self-evaluation dimension of Mental Health in Government and Private School Teachers.

The Table 2 depicts the predictors of Perception of Reality dimension of Mental Health in Government and Private School Teachers. The R^2 value is .86 which explains 86% of variance in Government and Private School Teachers. The value of adjusted R^2 is .858 which explains 86% of variance in Government and Private School Teachers. The F ratio is 161.58 which is significant at 0.0 level of confidence and thus explains variance. It is observed that the constant coefficient is -83.35 and Standardized β coefficient of Emotional Intelligence (EI) is .894 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 42.19 which is also significant at 0.01 level of confidence.

Table 2: Coefficients of Regression Model: Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills on Perception of Reality (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.929 ^a	.863	.858	3.004	.863	161.575	15	384	.000
a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc									
ANOVA ^b									
Model	Sum of Squares		df	Mean Square	F	Sig.			
1	Regression	21877.773	15	1458.518	161.575	.000 ^a			
	Residual	3466.325	384	9.027					
	Total	25344.098	399						
a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc									
b. Dependent Variable: PR									
Coefficients ^a									
Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.			
	B	Std. Error	Beta						

1	(Constant)	-83.353	5.124		-16.267	.000
	EI	1.195	.028	.894	42.185	.000
	N	.003	.064	.001	.051	.959
	E	-.026	.040	-.013	-.651	.516
	O	-.005	.039	-.002	-.116	.907
	A	.001	.032	.001	.041	.967
	C	-.007	.031	-.005	-.239	.811
	PLS	-.041	.012	-.078	-3.468	.001
	CC	.106	.072	.032	1.463	.144
	Distc	-.002	.079	-.001	-.028	.977
	SC	.129	.094	.027	1.383	.167
	SSS	.000	.053	.000	-.004	.997
	AR	.033	.096	.008	.343	.732
	EA	-.009	.056	-.005	-.162	.871
	PPS	.013	.062	.006	.204	.839
	Po R	-.054	.058	-.031	-.946	.345

a. Dependent Variable: PR

It is empirically proved that Emotional Intelligence is a significant positive predictor of Perception of Reality dimension of Mental Health. Therefore, as Emotional Intelligence increases, Perception of Reality dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized $\hat{a}$ coefficient of Presumptive Life Stress (PLS) is $-.078$ which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -3.47 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Perception of Reality dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Perception of Reality dimension of Mental Health decreases in Government and Private School Teachers.

It is again observed that the Standardized $\hat{a}$ coefficients of Personality factors – Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions – Confrontive Coping (CC), Distancing (Distc), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are $.001$, $-.013$, $-.002$, $.001$, $-.005$, $.032$, $-.001$, $.027$, $.000$, $.008$, $-.005$, $.006$ and $-.032$ respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving

& Positive Reappraisal are not significant predictors of Perception of Reality dimension of Mental Health in Government and Private School Teachers.

The Table 3 depicts the predictors of Integration of Personality dimension of Mental Health in Government and Private School Teachers. The R^2 value is .853 which explains 85% of variance in Government and Private School Teachers. The value of adjusted R^2 is .847 which explains 85% of variance in Government and Private School Teachers. The F ratio is 148.43 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant coefficient is -72.50 and Standardized β coefficient of Emotional Intelligence (EI) is .826 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 37.57 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence is a significant positive predictor of Integration of Personality dimension of Mental Health. Therefore, as Emotional Intelligence increases, Integration of Personality dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized β coefficient of Presumptive Life Stress (PLS) is -.163 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -7.00 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Integration of Personality dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Integration of Personality dimension of Mental Health decreases in Government and Private School Teachers.

Table 3: Coefficients of Regression Model: Emotional Intelligence, Presumptive Life Stress and Coping Skills on Integration of Personality (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F	df1	df2	Sig.
1	.924 ^a	.853	.847	3.310	.853	148.429	15	384	.000

ANOVA ^b					
Model		Sum of Squares	df	Mean Square	F
1	Regression	24388.646	15	1625.910	148.429
	Residual	4206.394	384	10.954	
	Total	28595.040	399		

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Dist

b. Dependent Variable: IP

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	-72.502	5.645			-12.844	.000
EI	1.173	.031	.826		37.572	.000
N	.083	.071	.025		1.178	.239
E	.022	.044	.010		.495	.621
O	-.038	.043	-.018		-.882	.378
A	.013	.035	.008		.373	.709
C	-.022	.034	-.014		-.645	.520
PLS	-.091	.013	-.163		-7.000	.000
CC	-.007	.080	-.002		-.087	.930
Distc	.024	.087	.008		.274	.785
SC	.007	.103	.001		.071	.943
SSS	.053	.058	.022		.900	.369
AR	-.181	.105	-.042		-1.722	.086
EA	.023	.061	.011		.381	.704
PPS	-.055	.068	-.025		-.811	.418
Po R	.026	.063	.014		.417	.677

a. Dependent Variable: IP

It is again observed that the Standardized β coefficients of Personality factors – Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions – Confrontive Coping (CC), Distancing (Distc), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are .025, .010, -.018, .008, -.014, -.002, .008, .001, .022, -.042, .011, -.025 and .014 respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving & Positive Reappraisal are not significant predictors of Integration of Personality dimension of Mental Health in Government and Private School Teachers. Thus the hypothesis no. 4 [H₄] that Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills will be significant predictors of Mental Health in Government and Private School Teachers stands rejected specifically with respect

to Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing Self-controlling, Seeking Social Support, Accepting Responsibility, Escape Avoidance, Planful Problem Solving & Positive Reappraisal regarding Integration of Personality dimension of Mental Health and alternative/rival hypothesis is tenable.

The Table 4 depicts the predictors of Autonomy dimension of Mental Health in Government and Private School Teachers. The R^2 value is .877 which explains 88% of variance in Government and Private School Teachers. The value of adjusted R^2 is .873 which explains 87% of variance in Government and Private School Teachers. The F ratio is 183.04 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant $\hat{a}$ coefficient is -82.3 and Standardized $\hat{a}$ coefficient of Emotional Intelligence (EI) is .884 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 44.05 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence is a significant positive predictor of Autonomy dimension of Mental Health. Therefore, as Emotional Intelligence increases Autonomy dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized $\hat{a}$ coefficient of Presumptive Life Stress (PLS) is -.098 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -4.59 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Autonomy dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Autonomy dimension of Mental Health decreases in Government and Private School Teachers.

Table 4: Coefficients of Regression Model: Emotional Intelligence, Personality, Presumptive Life Stress and Coping Skills on Autonomy (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.937 ^a	.877	.873	2.775	.877	183.043	15	384	.000

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

ANOVA^b

	<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	Regression	21140.352	15	1409.357	183.043	.000 ^a
	Residual	2956.645	384	7.700		
	Total	24096.998	399			

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

b. Dependent Variable: Auto

Coefficients^a

	<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>		<i>Sig.</i>
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>	
1	(Constant)	-82.384	4.732		-17.408	.000
	EI	1.153	.026	.884	44.050	.000
	N	.067	.059	.022	1.131	.259
	E	-.011	.037	-.006	-.289	.773
	O	-.035	.036	-.018	-.965	.335
	A	-.001	.030	-.001	-.033	.974
	C	-.011	.028	-.008	-.380	.704
	PLS	-.050	.011	-.098	-4.586	.000
	CC	-.048	.067	-.015	-.720	.472
	Distc	-.014	.073	-.005	-.188	.851
	SC	.146	.086	.031	1.688	.092
	SSS	-.001	.049	-.001	-.023	.981
	AR	-.010	.088	-.003	-.119	.905
	EA	.010	.051	.005	.191	.848
	PPS	-.040	.057	-.020	-.692	.490
	Po R	.006	.053	.003	.104	.917

a. Dependent Variable: Auto

It is again observed that the Standardized $\hat{a}$ coefficients of Personality factors – Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions – Confrontive Coping (CC), Distancing (Distc), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are .022, -.006, -.018, -.001, -.008, -.015, -.005, .031, -.001, -.003, .005, -.020 and .003 respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving & Positive Reappraisal are not significant predictors of Autonomy dimension of Mental Health in Government and Private School Teachers.

Table 5: Coefficients of Regression Model: Emotional Intelligence, Personality Presumptive Life Stress and Coping Skills on Group-oriented Attitudes (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	Change Statistics							
		R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.939 ^a	.882	.877	2.761	.882	190.499	15	384	.000

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21790.430	15	1452.695	190.499	.000 ^a
	Residual	2928.280	384	7.626		
	Total	24718.710	399			

a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc

b. Dependent Variable: GoA

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	t
1	(Constant)	-82.798	4.710		-17.580
	EI	1.192	.026	.903	45.781
	N	.010	.059	.003	.166
	E	-.014	.037	-.007	-.379
	O	-.014	.036	-.007	-.383
	A	-.009	.030	-.005	-.288
	C	-.003	.028	-.002	-.107
	PLS	-.042	.011	-.082	-3.914
	CC	-.053	.067	-.016	-.799
	Distc	-.044	.073	-.017	-.609
	SC	.172	.086	.036	2.000
	SSS	.031	.049	.014	.635
	AR	-.044	.088	-.011	-.503
	EA	.035	.051	.018	.690
	PPS	.071	.057	.034	1.243
	Po R	-.037	.053	-.021	-.697

a. Dependent Variable: GoA

The Table 5 depicts the predictors of Group-oriented Attitudes dimension of Mental Health in Government and Private School Teachers. The R^2 value is .882 which explains 88% of variance in Government and Private School Teachers. The value of adjusted R^2 is .877 which explains 88% of variance in Government and Private School Teachers. The F ratio is 190.50 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant $\hat{a}$ coefficient is -82.80 and Standardized $\hat{a}$ coefficient of Emotional Intelligence (EI) is .903 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 45.78 which is also significant at 0.01 level of confidence. It is observed that the Standardized $\hat{a}$ coefficient of Self-controlling (SC) is .036 which is significant at 0.01 level of confidence. The t-ratio of Self-controlling (SC) is 2.00 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence and Self-controlling are significant positive predictor of Group-oriented Attitudes dimension of Mental Health. Therefore, as Emotional Intelligence and Self-controlling increase, Group-oriented Attitudes dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized $\hat{a}$ coefficient of Presumptive Life Stress (PLS) is -.082 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -3.91 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress is a significant negative predictor of Group-oriented Attitudes dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress increases, Group-oriented Attitudes dimension of Mental Health decreases in Government and Private School Teachers.

It is again observed that the Standardized $\hat{a}$ coefficients of Personality factors – Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions – Confrontive Coping (CC), Distancing (Distc), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA), Planful Problem Solving (PPS) & Positive Reappraisal (PoR) are .003, -.007, -.007, -.005, -.002, -.016, -.017, .014, -.011, .018, .034 and -.021 respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving & Positive Reappraisal are not significant predictors of Group-oriented Attitudes dimension of Mental Health in Government and Private School Teachers.

Table 6: Coefficients of Regression Model: Emotional Intelligence, Personality Presumptive Life Stress and Coping Skills on Environmental Mastery (Mental Health) in Government and Private School Teachers

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.927 ^a	.859	.853	3.146	.859	155.460	15	384	.000
a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc									
ANOVA ^b									
Model	Sum of Squares		df	Mean Square	F	Sig.			
1	Regression	23086.046	15	1539.070	155.460	.000 ^a			
	Residual	801.651	384	9.900					
	Total	26887.698	399						
a. Predictors: (Constant), Po R, E, EI, SC, A, N, O, CC, C, PLS, AR, SSS, EA, PPS, Distc									
b. Dependent Variable: EM									
Coefficients ^a									
Model	Unstandardized Coefficients			Standardized Coefficients		Sig.			
	B	Std. Error		Beta	t				
1	(Constant)	-79.679	5.366		-14.848	.000			
	EI	1.202	.030	.873	40.525	.000			
	N	.051	.067	.016	.768	.443			
	E	-.003	.042	-.001	-.061	.951			
	O	-.030	.041	-.015	-.728	.467			
	A	.023	.034	.014	.676	.499			
	C	-.011	.032	-.008	-.353	.724			
	PLS	-.059	.012	-.109	-4.787	.000			
	CC	.013	.076	.004	.177	.859			
	Distc	-.102	.083	-.037	-1.231	.219			
	SC	.074	.098	.015	.752	.452			
	SSS	-.014	.056	-.006	-.253	.800			
	AR	-.084	.100	-.020	-.842	.401			
	EA	.004	.058	.002	.071	.944			
	PPS	-.125	.065	-.058	-1.927	.055			
	Po R	.100	.060	.056	1.660	.098			

a. Dependent Variable: EM

The Table 6 depicts the predictors of Environmental Mastery dimension of Mental Health in Government and Private School Teachers. The R^2 value is .85

which explains 86% of variance in Government and Private School Teachers. The value of adjusted R^2 is .853 which explains 85% of variance in Government and Private School Teachers. The F ratio is 155.46 which is significant at 0.01 level of confidence and thus explains variance. It is observed that the constant $\hat{a}$ coefficient is -79.68 and Standardized $\hat{a}$ coefficient of Emotional Intelligence (EI) is .873 which is significant at 0.01 level of confidence. The t-ratio of Emotional Intelligence (EI) is 40.53 which is also significant at 0.01 level of confidence. It is empirically proved that Emotional Intelligence is a significant positive predictor of Environmental Mastery dimension of Mental Health. Therefore, as Emotional Intelligence increases, Environmental Mastery dimension of Mental Health also increases in Government and Private School Teachers. It is also observed that the Standardized $\hat{a}$ coefficient of Presumptive Life Stress (PLS) is -.109 which is significant at 0.01 level of confidence. The t-ratio of Presumptive Life Stress (PLS) is -4.79 which is also significant at 0.01 level of confidence. It is also observed that the Standardized $\hat{a}$ coefficient of Planful Problem Solving (PPS) dimension of Coping Skills is -.058 which is significant at 0.01 level of confidence. The t-ratio of Planful Problem Solving (PPS) dimension of Coping Skills is -1.93 which is also significant at 0.01 level of confidence. It is empirically proved that Presumptive Life Stress and Planful Problem Solving dimension of Coping Skills are significant negative predictors of Environmental Mastery dimension of Mental Health in Government and Private School Teachers. Therefore, as Presumptive Life Stress and Planful Problem Solving dimension of Coping Skills increase, Environmental Mastery dimension of Mental Health decreases in Government and Private School Teachers.

It is again observed that the Standardized $\hat{a}$ coefficients of Personality factors – Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) & Conscientiousness (C) and Coping Skills dimensions – Confrontive Coping (CC), Distancing (Distc), Self-controlling (SC), Seeking Social Support (SSS), Accepting Responsibility (AR), Escape-Avoidance (EA) & Positive Reappraisal (PoR) are .016, -.001, -.015, .014, -.008, .004, -.037, .015, -.006, -.020, .002 and .056 respectively which are not significant even at 0.05 level of confidence. Therefore, Personality factors – Neuroticism, Extraversion, Openness, Agreeableness & Conscientiousness and Coping Skills dimensions – Confrontive Coping, Distancing, Self-controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance & Positive Reappraisal are not significant predictors of Environmental Mastery dimension of Mental Health in Government and Private School Teachers.

CONCLUSION

The present research reported Emotional Intelligence as a significant positive predictor whereas Presumptive Life Stress was a significant negative predictor of Positive Self-evaluation, Perception of Reality, Integration of Personality,

Autonomy, Group-oriented Attitudes and Environmental Mastery dimensions of Mental Health in Government and Private School Teachers.

REFERENCES

- Bacharach, S., Bauer, S., & Conley, S. (1986). Organizational analysis of stress: The case of elementary and secondary schools. *Work and Occupations*, 13 (1): 7-32.
- Bachkirova, T. (2005). Teacher stress and personal values: An exploratory study. *School Psychology International*, 26 (3): 340-352.
- Bhatt, J.R., & Chauhan, A.S., (2013). Effect of personal variables on locus of control of college students. *Indian Journal of Health and Wellbeing. Indian Association of Health, Research & Welfare*. 4 (5): 495-515.
- Blase, J.J. (1986). A qualitative analysis of sources of teacher stress: Consequences for performance. *American Educational Research Journal*, 23: 13-40.
- Blasé, J. (1982). A social-psychological grounded theory of teacher stress and burnout. *Educational Administration Quarterly*, 18 (4): 93-113.
- Chouhan, V.L., & Joshi, V., (2012). A Study of Family as a Precipitator of Parental Involvement, Counseling Needs & Self Concept. *Journal of Well-being. Cross & Crown Publications*, 6, (1): 20-24.
- Dwivedi, S. (2012). Work Values in Relation to Traditional and Non-traditional Vocational Courses. *Journal of Well-being. Cross & Crown Publications*, 6, (1): 41-47.
- Ghosh, D. (2013). Self esteem and depression of the tribal and non-tribal students: Its role on academic achievement need. *Indian Journal of Health and Wellbeing. Indian Association of Health, Research & Welfare*. 4, (5): 1042-1048.
- Guglielmi, R., & Tatrow, K. (1998). Occupational stress, burnout, and health in teachers: A methodological and theoretical analysis. *Review of Educational Research*, 68 (1): 61-99.
- Hastings, R., & Bham, M. (2003). The relationship between student behavior patterns and teacher burnout. *School Psychology International*, 24 (1): 115-127.
- Hepburn, A., & Brown, S. (2001). Teacher stress and management of accountability. *Human Relations*, 54 (6): 691-715.
- Miner, B. (2009). Teachers' revolving door. *Rethinking Schools*, 23 (2): 12-15.
- Patnaik, B., and Panigrahi, A., (2013). Parent's attitude towards schooling and education of children. *Indian Journal of Health and Wellbeing. Indian Association of Health Research & Welfare*. 4 (5): 1061-1066.
- Pettegrew, L., & Wolf, G. (1982). Validating measures of teacher stress. *American Educational Research Journal*, 19 (3): 383-396.
- Public Schools of North Carolina (2007). *The annual report of the reasons teachers leave the profession*. Retrieved April 4, 2010, from www.ncpublicschools.org/docs/recruitment/surveys/turnover/reasonsteachersleave_06-07.pdf
- Rao, S.V.V., & Reddy, K.B.S., (2013). Impact of gender, locality and nature of course on academic stress among professional students. *Indian Journal of Health and Wellbeing. Indian Association of Health, Research & Welfare*. 4 (5): 1067-1070.
- Soin, D (2012). Spirituality, Well-being, Happiness in elderly-Impact of Meditation and Yoga. *Journal of Well-being. Cross & Crown Publications*, 6 (1): 8-14.
- Sutton, R. (1984). Job stress among primary and secondary schoolteachers: Its relationship to wellbeing. *Work and Occupations*, 11 (1): 7-28.

IMPACT OF SPORTS PARTICIPATION ON SELF-CONCEPT OF HIGHER SECONDARY STUDENTS

*Samyak Makwana**

ABSTRACT

The present investigation was conducted to compare Self-concept of students who participated in Sport with Non-Participating Students. For observing the impact of Sport on Self-Concept, 400 Students studying in 12th standard (mean age is 17.12 ± 0.320) were selected from non-residential high schools of Surendrangar, Gujarat (India). Four groups, each consists of 100 students were drawn such that First and Second Group consisted of Arts and Science students, respectively, who participated in sports. Similarly, Third & forth Group consisted of Arts and Science students who did not participate in sports. Self-Concept Questionnaire was used for assess self-concept, For analysis of the results, F test followed by t-test was used. Findings indicate there is a significant differences in total Self-concept among Sport participating and Non-participating groups. Further analysis indicated that students who participated in sports had higher physical self-concept than non-participating group.

Keywords: Civil behaviour, Mental health, Physical health, Self-concept, Social development, and Sport participation

INTRODUCTION

Involvement in Sports is essential for developing good physical health and mental health both. It impacts development of characteristics, such as, personality, like ego functions, leadership, problem solving approach, socialization etc. A study by Canadian Council of Social Development (2001) indicated that participating in

* Department of Psychology, KavishreeBotadkar Arts and Commerce College, Botad, Bhavnagar university, Gujarat, E mail: samyak_makwana@yahoo.co.in

sports activities positively influenced physical and social development, behaviour and Social skill development in youth. Sports improved their health in turn helped them make friends, improved their feelings about themselves, helped them succeed at school, and become more active with their family. Sports provide pleasure for children and gives them the opportunity to meet new people by the make new friendships, breaking the isolated mould many low income and underprivileged youth fall under. Children develop a sense of self-belonging and confidence through social cohesion. Participation in sport improves the development of peer relationships, establishes the notion of trust and builds teamwork skills. Participants experience a high degree of interaction with other individuals within their community, which not only benefits the child, but such interactions also translate into the community's socio and economic development. Thus, in addition to the personal benefits for the child, youth involvement in sports also has a broader impact on the overall community. Participation in sport has a positive effect on reducing the involvement and exposure youths may have to violence and unethical activity. Oguma and Shinoda (2004) showed that sports or physical activities of moderate intensity, decreases the risk of long term physical illness such as diabetes, hypertension and heart diseases. Not only physical benefits, psychological or mental characteristics are also associated with physical activity participation. Marsh, Richards, Johnson, Roche, & Treymay (1995) noted that self-esteem and physical activity have positive correlations. Dishman *et al.* (2006) indicated in their study that adolescent girls who participate in sports had higher level of self-esteem, more positive mood and less depression as compare to sport non-participating girls. Centre for Research in Girls and Women in Sports, Minnesota (1997) concluded that sport participating girls have more satisfied in terms of body image than non- participating

In 1998, a survey in Canada found that almost 2.2 million Canadian children regularly took part in some kind of organised sport activity (Kremarik, 2000). America, 20 million children aged 6-18, participated in organised sports after school (Chambers, 1991). In a South Australian study, 69% of 12 year old boys and 62% of 12 year old girls participated in sports as their first choice of leisure activity (Robertson, 1992). The growth in youth sport participation has been paralleled by an increased interest in competitive sport by physical educators, social scientists and the media. It has been claimed that sport activities assist children's physical growth and maturation (Committee on Sports Medicine and Fitness and Committee on School Health, 2001), physiological functions (Stuart Shephard, & Siefen, 2002), opportunities for socialisation (Videon, 2002) and psychological development (Stuart, 2003).

Self-concept has been defined to consist of learned verbal labels about oneself that elicit emotions and direct or control behaviour. Positive verbal labels are expected to lead to successful performance that is reinforced by others, which

ent, c
ir hea
ped the
provid
ple ab
ome a
ging a
oves
d bui
with ot
but su
lopme
in spo
ort ha
have
at spo
ng te
Not or
ted w

in turn, reinforces positive self-concept (Staats, 1996). With the progress in theoretical understanding of self-concept, the idea of self-concept as a uni-dimensional general sense of self-worth or a global self-concept was replaced by the notion of a multifaceted and hierarchical structure. Measuring self-concept in physical, social and academic perspectives became possible with the development of instruments examining multifaceted self-concept, such as the Tennessee Self-Concept Scale, the Piers-Harris Self-Concept and the Self-Description Questionnaire (SDQ) (Bryne, 1996).

Investigations of the effects of sport intervention programs on the self-concept of children have adopted an experimental approach. The results demonstrated a positive effect on children's self-concept after the intervention. The experimental programs included swimming (Miller, 1989), basketball and field hockey (Salokun, 1990), athletics (Percy, Dziuban & Martin, 1981). Studies have utilized multidimensional assessment methods to evaluate children's perceptions of their specific sport competence, physical efficacy, and physical competence. It appears that specific measures of physical self-concept have been more accurate and reliable than measures of global self-worth in predicting sport participation (Weiss, 1993).

The multidimensional self-concept measurements have provided a vehicle for a comprehensive investigation of the differences between participation in sport and a diverse range of self-concepts of children, such as peer relations, parent relations and several areas of academic self-concept such as maths and reading. For example, studies have identified a positive link between participation in sport and children's socialisation (Videon, 2002). Surprisingly, few researchers have attempted to investigate the relationship between self-concept in peer relations and the extent of sports participation.

The present research was conducted to compare self-concept of students who participated in sports with non-participating students. It was hypothesized that there is no significant differences in Total Self-concept of sport or the score on the various dimensions (Physical, Social, Temperamental, Educational, Intellectual and Moral) of Self-concept of sport participating students and non-participating students.

METHOD

Design

An ex facto research design used for the present research.

Sample

Four hundred students were selected from general population of Surendrangar district, Gujarat (India) from students of 12th standard of arts and science stream. Four groups, each consisting of 100 students were formulated

where Group 1 consisted of Arts students who participated in sports, Group 2 Science students who participated in sports, Group 3 of Arts, Non-participating students and Group 4 of science Non-participating students. All the students were aged 17-18 years (Mean $\pm$ SD = 17.12 ± 0.3), Middle and Higher Socio-Economic Status (SD=0.2), Hindu and Jain religion followers (SD=0.2).

Tools

The tools used to assess the variables under study are as follows:

Self-Concept Questionnaire (SCQ- Sarswat and Gaur, 1981): The Self-Concept questionnaire provides six dimensions of Self-Concept: 1. Physical, 2. Social, 3. Intellectual, 4. Moral, 5. Educational, 6. Temperamental. It also gives a total Self-Concept score. The inventory contains 48 items. Each dimension contains eight items. The respondent is provided with five alternatives to give his responses ranging from most acceptable to least acceptable description of his Self-Concept. There are five categories of degree of self-concept where the cut-off scores for total self-concept are 193-240 = High self-concept, 141-192 = Above average self-concept, 97-144 = Average self-concept, 49-96 = Below average and 1-48 = Low self-concept. Similarly 33-40, 24-32, 17-24, 9-16, 0-8 score range indicates high, above average, average, below average and low self-concept in terms of Physical, Social, Educational, Moral and Intellectual self-concept. The Validity of scale is 0.8 and Reliability is 0.9.

Procedure

To observe impact of Sport on Self-concept of higher secondary students, 400 students, age 17 to 18, middle and higher socio economic status, Hindu and Jain religion belonging were selected from general population of high school in Surendranagar-Gujarat-India. After obtaining written consent for data collection, the self-concept questionnaire was filled up by each student.

RESULTS AND DISCUSSION

The Self-concept of each student was calculated (score on each dimension as well as the total score) and group means along with standard deviation were calculated.

Table 1: Mean and SD of Self-Concept of Arts and Science/Sports Participating and Non Participating Groups

Variable	Comparison Groups		Mean	SD	t value
Total	Arts Sports	(Gr 1)	151.10	6.28	0.1
Self-concept	Science Sports	(Gr 2)	150.99	7.34	
	Arts Non-sports	(Gr 3)	141.16	8.71	

SC-1	Science Non-sports	(Gr 4)	140.49	8.34	0.55
	Arts Sports	(Gr 1)	27.24	3.35	0.48
	Science Sports	(Gr 2)	27.49	3.85	
	Arts Non-sports	(Gr 3)	21.48	4.61	0.95
SC-2	Science Non-sports	(Gr 4)	20.86	4.55	
	Arts Sports	(Gr 1)	27.49	3.61	.91
	Science Sports	(Gr 2)	27.95	3.46	
	Arts Non-sports	(Gr 3)	19.64	3.98	0.94
SC-3	Science Non-sports	(Gr 4)	19.10	4.11	
	Arts Sports	(Gr 1)	23.51	0.50	1.1
	Science Sports	(Gr 2)	23.26	2.20	
	Arts Non-sports	(Gr 3)	24.65	2.54	0.80
SC-4	Science Non-sports	(Gr 4)	24.37	2.34	
	Arts Sports	(Gr 1)	21.22	3.76	
	Science Sports	(Gr 2)	21.22	3.76	0.0
	Arts Non-sports	(Gr 3)	24.13	1.86	2.7*
SC-5	Science Non-sports	(Gr 4)	25.16	3.17	
	Arts Sports	(Gr 1)	23.45	0.50	.70
	Science Sports	(Gr 2)	23.50	0.50	
	Arts Non-sports	(Gr 3)	23.46	0.52	.75
SC-6	Science Non-sports	(Gr 4)	23.52	0.59	
	Arts Sports	(Gr 1)	28.19	3.50	1.2
	Science Sports	(Gr 2)	27.57	3.71	
	Arts Non-sports	(Gr 3)	27.80	3.47	0.62
	Science Non-sports	(Gr 4)	27.48	3.74	

From Table 1 it can be seen that only one of the mean difference, *i.e.* non sports arts and science group on SC-4 was significant. Thus it is apparent that self-concept does not differ between the arts and science students.

Table 2: Comparison of self-concept between Arts sports and non-sports groups

<i>Self Concept</i>	<i>Mean difference</i>	<i>T</i>
Total Self-Concept	9.9	9.2*
Physical Self-concept	5.7	10.0*
Social Self-Concept	7.8	14.5*
Temperamental Self-Concept	1.1	4.3*
Educational Self-Concept	2.9	6.9*
Moral Self-Concept	1.0	0.13

From Table 2 it can be seen that there was a significant difference between the Arts Sports and non-sports groups on the total as well as dimension scores except moral and intellectual dimension.

Table 3: Comparison of self-concept between Science sports and non-sports groups

<i>Self Concept</i>	<i>Mean difference</i>	<i>T</i>
Total Selfconcept	10.5	9.4*
Physical Self-concept	06.6	11.1*
Social Self-concept	08.8	16.4*
Temperamental Self-concept	1.1	3.4*
Educational Self-concept	3.9	8.0*
Moral Self-concept	2.0	0.2
Intellectual Self-concept	09.0	0.17

$p < 0.01$

Similar to the arts group, here again there was a significant difference between the Sports and non-sports groups on the total as well as dimension scores except moral and intellectual dimension.

Table 4: One Way Analysis of Variance of Self concept of four groups

<i>Variable</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F value</i>
Physical	3860	3	1287	75.46*
Self-Concept	6752	396	17	
	10612	399		
Social Self-Concept	6997	3	2332	161*
	5727	396	14	
	12724	399		
Temperamental	133	3	44	10
Self-Concept	1694	396	4	
	1827	399		
Educational	1226	3	408	39
Self-Concept	4147	396	10	
	5373	399		
Moral Self-Concept	0.3	3	0.1	0.3
	111	396	0.2	
	111.3	399		
Intellectual	30.0	3	10.0	0.7
Self-Concept	5172	396	13.0	
	5202	399		
Total Self Concept	10468	3	34.89	58.37*
	23672	396	60.00	
	34140	399		

$p < 0.01$

Table 4 indicates there is significant differences among the in terms of Total self concept, Physical self concept and Social Self concept, There are no significant differences in Temperamental, Educational, Moral and intellectual self concept.

Studies have investigated the extent of the relationship between participation in a sport program and children's global self-concept. Klint's (1985) research showed that sport participants scored significantly higher on the perceived general self-worth scale when compared to non-participants. The results this study identified that participants had a higher level of *perceived self-worth* than did non-participants. Studies such as Alexander (1990), Biddle (1993), Hope (1989) and MacMahon (1990) reported a significant relationship between physical self-concept of children and sport participation. The results of this study suggested that participants perceived themselves as more competent in sports and games than did non-participants. A Study conducted to investigate the elite and talented young sport participants, found that talented young swimmers had significantly higher physical self-concept (Vallerand, Pelletier, & Gagne, 1991) and female elite gymnasts reported higher levels of general, physical, and cognitive competence and higher levels of self-concept than non-elite gymnasts (Kolt & Kirkby 1993).

In our result indicates sports participating Arts and Science students groups have high Physical and Social self concept than Non-Participating Arts and Science Groups. They perceives themselves more physically strong, healthy and have more friends, they can build relationship easily with others. While Non-participated group have below average self- concept, indicates they perceived themselves less physically strong, not satisfactory views on their body and less self-confidence for playing. The results support the reviews of other related research regarding self-concept and sport participation relationship. However, among the sports participating Arts and Science students among (n= 200), 78 students were observed to have below average Educational self-concept. It means they perceived themselves poor in studies and / or were not interested in studies. Thus, the results of the present study indicate that self-concept specifically physical and social is better in sports participating students and the relationship holds for arts as well as science students.

REFERENCES

- Alexander, J. T. (1990). Hyperactive children: Which sport has the right stuff. *Physician and Sports Medicine*, 18(4): 105-108.
- Biddle, S. J. (1993). Children, exercise and mental health. Special issue: Exercise and psychological well being. *International Journal of Sport Psychology*, 24: 200-216.
- Bryne, B. M. (1996). Measuring self-concept across the life span. Washington: *American Psychological Association*.

- Canadian Council on Social Development. (2001). Recreation and children and youth living in poverty: Barriers, benefits and success stories. Ottawa: Canadian Pa and Recreation Association.
- Chambers, S. T. (1991) Factors affecting elementary school students' participation sports. *The Elementary School Journal*, 91: 413-419.
- Committee on Sports Medicine & Fitness (2001). Organized Sports for Children and Preadolescents. *Pediatrics*, 107, 1459-1463.
- Dishman, R.K., Hales, D.P., Pfeifer, K.A., Felton, G., Saunders, R., Ward, D. S. et al. (2006). *Physical self-concept and self-esteem mediate cross-sectional relations between physical activity and sport participation with depression symptoms among adolescent girls.*
- Hope, A. (1989). *Psychosocial factors that discriminate among exercisers, occasional exercisers, and non exercisers.* Ph.D. dissertation. Oregon: Microform Publication.
- Klint, K. A. (1985). *Participation motives and self-perceptions of current and former athletes in youth gymnastics.* MSc dissertation. Oregon: Microfiche Publication.
- Kolt, G. S. & Kirkby, R. J. (1993). Psychological profiles of high-level female competitive gymnasts. *The 2nd Maccabiah-Wingate International Congress on Sport and Coaching Sciences: Proceeding*, Netanya (Israel), 111-120.
- Kremarik, F. (2000). A family affair: children's participation in sports. *Canadian Social Trends*, 58: 20- 25.
- Marsh, H.W., Perry, C., Horsely, C., & Roche, L. (1995). Multidimensional self-concept of elite athletes: How do they differ from the general population? *Journal of Sport and Exercise Psychology*, 17: 70-83.
- Marsh, H. W., Richards, G. E., Johnson, S., Roche, L., & Treymayne, P. (1994). Physical self-description questionnaire: Psychometric properties and a multitrait-multimethod analysis of relations to existing instruments. *Journal of Sport and Exercise Psychology*, 16: 270-305. McAuley, E., Blissmer.
- Miller, R. (1989). Effects of sports instruction on children's self-concept. *Perceptual and Motor Skills*, 68: 239-242.
- Oguma, Y., & Shinoda-Tagawa, T. (2004). Physical activity decreases cardiovascular disease risk in women: Review and meta-analysis. *American Journal of Preventive Medicine*, 26: 407-418.
- Percy, L. E., Dziuban, C. D., & Martin, J. B. (1981). Analysis of effects of distance running on self-concept of elementary students. *Perceptual and Motor Skills*, 52, 181.
- Robertson, I. (1992). *Children, Aussie sports and organised junior sport.* Canberra: Australian Sports Commission.
- Salokun, S.O. (1990). Effects of training in basketball and field-hockey skills on the concepts of Nigerian adolescents. *International Journal Sport Psychology*, 21, 121-137.
- Saraswat, R. K., Gaur, J. S. (1981). Approaches for the measurement of self-concept: An Introduction. *Indian Educational Review*, 16 (3): 114-119.
- Staats, A.W. (1996). *Behavior and personality.* New York: Springer.
- Stuart, M. E, Shephard, R. J. & Siefen, R. G. (2002). The relationship between physical activity and self-image and problem behaviour among adolescents. *Social Psychiatry & Psychiatric Epidemiology*, 37: 544-551.

- Stuart, M. E. (2003). Sources of Subjective Task Value in Sport: An Examination of Adolescents with High or Low Value for Sport. *Journal of Applied Sport Psychology*, 15: 239-255.
- Vallerand, R. J., Pelletier, L. G. & Gagne, F. (1991). On the multidimensional versus unidimensional perspectives of self esteem: A test using the group-comparison approach. *Social Behaviour and Personality*, 19: 315.
- Videon, T. M. (2002). Who plays and who benefits: gender, interscholastic athletics, and academic outcomes. *Sociological Perspectives*. 45: 415-444.
- Weiss, M. R. (1993). Psychological effects of intensive sport participation on children and youth: Self-esteem and motivation. In Bernard, R. C. & Arthur, J. P. (Eds.), *Intensive participation in children's sports*. Champaign: Human Kinetics Publishers.



C
v
S
in
a
in
W
s
fe
D
c
w
a
b
p
p
c
(C
o
a
sh
sh
si

* R
—
** R
—

SEXUAL MOLESTATION OF WOMEN: BLAME ATTRIBUTION AND SEVERITY OF PUNISHMENT

Vandana Singh and Pramthesh Pandey***

ABSTRACT

Cases of sexual molestation and eve-teasing are rising day by day but very little effort is made to know what today's youth thinks about it. Sexual molestation is much graver than Eve-teasing but most of the time it is merged with it. This paper tries to explore that on which the blame is attributed in these cases? What are the factors which provokes such incidents? How women can avoid sexual molestation or eve-teasing? What kind of punishment should be given to the accused and how much should it be severe? Sample used in this study were the 30 males and females in the age range of 17 to 25 years of age from Allahabad University. Data were collected with the help of an open ended questionnaires constructed by the researcher itself. Answers given by the participants were analyzed with the help of the method of Content Analysis (Thematic) and it was found that more than 50 % of the participants attributed blames on Females. In the causes it was found that Media (63.33%) and provocative dresses (76%) were considered as playing major role to provoke such cases. Major suggestions which were given to avoid such cases were no late nights (90%), ban on provocative films and websites (66.67%) and Women should carry equipments for the self defense. 100 % of the population accepted that laws are not strict enough to curb such acts therefore amendments should be done and 83% wanted that laws should be implemented strictly. 73.33% participants said that life sentence should be given to the accused in the form of punishment. There was no significant difference in the views of male and female participants.

* Research Scholar, Department of Psychology, University of Allahabad, Allahabad
- 211002 Email ID- vandana.singh274@gmail.com and

** Research Scholar, Department of Psychology, University of Allahabad, Allahabad
- 211002 Email ID- ppramthesh@gmail.com

Keywords: Blame attribution, Gender discrimination, Nature of punishment Sexual Molestation, and Sexual harassment

INTRODUCTION

A woman who is an integral part of the society has been subjected to gender discrimination and have always been suppressed. There are various kinds of crimes and atrocities done on them. One of the crimes is Sexual harassment which is an intimidation, bullying or coercion, of sexual nature, or the unwelcomed or inappropriate promise of rewards, in exchange for sexual favours. The word eve teasing was not used in this research as Eve – referred to first woman “Eve” which means the temptress which shows that the woman is in some way responsible for the behaviour of the perpetrators of this act. Sexual molestation is masked by its deceptive stage name called ‘eve teasing’. It disguises sexual harassment and make it appear harmless intention of act (Srinivasan, 1998). Whereas Sexual molestation is a form of sexual aggression that ranges in severity from sexually suggestive remarks, brushing in public places and catcalls to outright groping. Sometimes it is referred to with a coy suggestion of innocent fun, making it appear innocuous with no resulting liability on the part of perpetrators.

Sexual molestation is the most ubiquitous and insidious of all the forms of violence against women. Women in all the fields whether it is public or private are affected by it and it has psychological, medical, social, political, legal and economic implications (Srinivasan, 1998). In India a woman is sexually molested after every 26 minutes and sexually harassed after every 51 minutes. 91.7% of all inmates in women’s hostel and 88.2% of the entire day scholar had faced sexual harassment on the road was reported by Gender study group of University of Delhi in 1998.

This form of a crime is very difficult to prove but it received public and media attention in 1960. After that there were many cases which moved the hearts of the people and court and law makers to take some action. In 1998 Sarita Shah Case happened in Chennai in which Eve teasing led to the death of victim Pearl Gupta in Delhi killed herself in 2007 because of the same. Priyadarshini Mattoo’s case in 1996 created a new term stalking which means repeated victimization of the person led to the Sexual assault prevention Bill. Many more incidents were reported later. First Police used to let offender go, then they started giving Murga punishment. In 2008, 19 yrs old youth was punished by distributing 500 handbills showing consequences of indecent act. Then police started taking measures by deploying plain clothed female police officers to have eye on eve teasers. Cases leading to acid throwing made eve teasing a non bail able offence. There are many groups like Nirbhaya Kamataka which has started many programmes like blank noise, samvada, vimochana to create awareness and safety programmes for the women. In Metros and local trains different lady compartment were made for the benefit of women. In Delhi prohibition of eve teasing bill was also passed.

But all these measures are not able to stop such crimes against women. So, what are the lacunas in the laws? We have seen that these cases are raising day by day and recent case of Guwahati actually led people think that whether humanity is dead or we all have become animals that we cannot feel the pain of other person. Why more than 12 people did not hesitate in sexually assaulting a girl and why nobody came to rescue her? All these questions led the researcher to explore the views of young generation towards eve-teasing or sexual molestation. And it is evident in the previous researches also that if the subjects were asked to consider a hypothetical victim described in an impersonal manner, they were not able to perceive the actual victims and their plight (Barnett et.al., 1991). Therefore Researcher cited the real case study to know about the people's view regarding blame attribution in the case of sexual molestation.

In social Psychology and social problems Blame attribution receives considerable attention from the researcher especially victim blaming. The father of Attribution theory *i.e.* Heider (1958) believed that causes of others' behaviours and circumstances were identified by most of the people who acts as a naïve psychologist. It was proposed by Kelly (1972) that the people who make internal attribution (person's supposed personal characteristics as the cause) and others are there who attribute to external cause (environment and the situation as the cause). Blaming the victim is perceived as fundamental attribution error in which a person overemphasizes personal attributes and discounts environmental attributes (Ross, 1978). So, to find the readily apparent explanation for such hate crimes against women and to determine on whom the blame is attributed by the young generation researcher did this exploratory study.

According to the Jewkes, Sen, Garcia-Moreno (2002), 33% of women with a history of sexual abuse and 15% of women with a physical abuse showed signs of psychiatric disorder. Only 6% of women without a history of physical abuse showed signs of psychiatric disorder. Victims of sexual assault can experience a wide range of physical, psychological and emotional disorders such as shock, anxiety, depression, post-traumatic stress disorder or rape trauma syndrome and other trauma related health issues. Psychological trauma can manifest itself in physical reactions like stomachaches, headaches, back problems. Because of the severity of this issue and the significant implications it has, it is important that research continue on the topic of sexual abuse and molestation. With this knowledge it is imperative that health practitioners, psychologists and social workers continue to expand their knowledge of sexual abuse.

Objective

- To determine blame attribution in the case of sexual molestation.
- To find the causes and factors which provoke such behaviour?
- To determine the ways to escape or avoid such behaviour.

- To determine the nature of punishment for the accused.
- To know whether laws are strict enough to handle such cases.

METHOD

Sample

The aim of this study was to know on whom the blame is attributed on, in the case of sexual molestation. Causes and factors responsible, methods to avoid such things and nature of punishment were also explored. Sample of the study was taken from the Student population of Allahabad University as with the help of review of literature it was perceived that victims and accused were mostly from the young population. Therefore, Purposive sampling method was used to select a sample of 30 males and females in the age range of 17 to 25 years of age from Allahabad University.

Tools

Certain questions were constructed by the researcher to elicit the required data pertaining to the study. The research tool consisted of 5 questions:

- In the case of sexual molestation of women whom do you consider responsible?
- In your opinion what provokes such behaviour?
- Is there any suggestion to avoid or escape such behaviour?
- What should be the nature of punishment for the person who commits such acts?
- What are your views about the existent rules meant to curb such acts?

After data collection *Content analysis* was done:

- Conceptualizing and Categorizing: Blame Attribution, Causes and factors, Suggestions, Nature of punishment.
- Material for analysis: Answers of the questions given in the questionnaire constructed by the researcher itself.
- Recording Units: Themes under the concepts stated above – a single assertion about some subjects.
- Analysis: The data were input by the researcher, using SPSS (version 16) software. Frequency was determined by counting the number of times category is coded.
- Category: used was Yes/No.

Numbers were quite small to portray something therefore percentage was used in the analysis.

RESULTS AND DISCUSSION

Table No. I show demographic details of the respondents such as Gender as there are 63.33% of them were females and 36.67% of them were male.

60% of them were in the age group of 17 to 19 years of age. 73.33% of them belong to undergraduate group. All the participants were of Hindu religion. Rural background was represented by 66.7% of the sample and 33.3 were from rural background. 96.7% of the sample represented middle class population.

Table I : Socio Demographic Variables

<i>Socio - demographic</i>	<i>N</i>	<i>%</i>
Gender		
Male	11	36.7
Female	19	63.3
Age		
17 - 19	18	60
20 - 22	7	23.3
23 - 25	5	16.7
Educational qualification		
Undergraduates	22	73.3
Post graduates	8	26.7
Religion		
Hindu	30	100
Background		
Rural	20	66.7
Urban	10	33.3
Socio economic status		
Middle class	29	96.7
Lower class	1	3.3

Table No. II : About Sexual Molestation

<i>BLAME ATTRIBUTION</i>	<i>N</i>	<i>%</i>
Males	11	36.67
Females	16	53.33
Both	7	23.33
No one	3	10
Inclination towards western culture	10	33.33
Irresponsible police and laws	6	20
Society	4	13.33
CAUSES & FACTORS	N	%
Media (Films & Songs)	19	63.33
Internet and mobile	5	16.67
Male dominated mentality	11	36.67
Sexual needs of men	6	20
Provocative dresses	23	76.67
Laws are not strict	30	100
Lack of education/illiteracy	9	30

Table no II shows that most of the participants attributed blame on females (53.33%), and 36.67% of them believed that males were responsible. Westernization of the society was also considered responsible (33.33%) and irresponsible police and laws were also blamed by 20% of them. Society's responsibility constituted of 13.33%. 10% of them said that no one is responsible for the cases of sexual molestation.

In the causes and factors responsible for the sexual molestation of women, 100% of the participants considered that laws are not strict enough, therefore, women who are accused feel relaxed to commit such crime. Provocative dresses were considered responsible by 76.67% of the participants, 63.33% of them said media (films and songs) are also one of the causes. Male dominated mentality (36.67%), Lack of education (30%), Sexual needs of men (20%), Internet and mobile (16.67%) were some of the causes emphasized by the participants.

Table No. III: Suggestions and nature of Punishment in the case of sexual molestation

<i>Suggestion to avoid or escape</i>	<i>N</i>	<i>%</i>
Women should be careful	7	23.33
Carry equipment of self defense	12	40
Do not befriend strangers	2	6.67
No late nights	27	90
Learn karate and martial arts	4	13.33
Ban on sexually provocative films and websites	20	66.67
Sex education	9	30
Helpline numbers	1	3.33
Moral education for males	19	63.33
Laws should be implemented strictly	25	83.33
Nature of punishment	N	%
Economic, mental and physical punishment	9	30
According to victim's opinion	1	3.33
Marriage with the victim	3	10
Ostracized from the society	4	13.33
Life sentence	22	73.33
Death sentence	7	23.33
10yrs imprisonment	2	6.67
Castration of sexual organs	2	6.67

In table no. III it was found that large number of the participants (90% N=27) suggested no late nights for the girls to avoid sexual molestation. 83.33% wanted strict implementation of laws. There were also suggestions for ban on sexually provocative films and websites (66.67%). 63.33% of the participants

suggested for moral education for males. There were also suggestions for the women to carry equipments for the self defense (40%), sex education (30%), learn karate and martial arts (13.33%) and they also wanted that women should not befriend strangers (6.67%). 3.33% of the participants demanded helpline numbers for the women.

In the nature of punishment 73.33% wanted life sentence for accused and there were also some of the participants who wanted to give death sentence to them. Ostricization from the society was also suggested by 13.33% of the participants. 10% of them wanted the victim to marry the accused. 6.67% of them said the nature of punishment should be ten years of imprisonment and castration of the sexual organs.

The objective of the study was to explore the views of the younger generation about the blame attribution and severity of punishment in the case of sexual molestation of women. To fulfill the purpose of the study open ended questions were asked to the respondent. This qualitative study explored variety of themes generated under the four main themes of Blame attribution, causes provoking sexual molestation of women, suggestions to avoid such acts, punishment for the accused. The most prominent themes *i.e.* at least generated by half of the sample will be discussed in this section.

Finding under the theme of blame attribution suggested that most of the participants attributed blame on the females which can be supported by Attribution theory (cf. Kelly, 1967) that people blame the perpetrators less when the traditional sex norms are violated by victims for ex. A woman is considered responsible sexual violence against her if she is clearly violating the traditional sex norms as it was also shown in the causes provoking the cases of sexual molestation that late nights and provocative dresses are responsible for such cases. Participants accepted that वेश भूषा का फर्क पड़ता है, क्योंकि छोटे कपड़े पहनने से लडकों का आकर्षण बढ़ता है। महिलाओं का श्रीगार और अंग प्रदर्शन बहुत बड़ा कारण है। Few of them suggested that महिलाओं को खुद अपने पहनावे का ध्यान रखना चाहिए और रहन सहन की सही तरीके से रखना चाहिए तथा बहार माता पिता के साथ जाना चाहिए।

This kind of blame attribution can also be explained with the help of Lerner's "Just world theory" (Lerner, 1965, Lerner & Simon, 1966) where it is posited that the world is largely a safe and fair place to live in, therefore to make the perceiver believe in the just world individual's action is blamed. Those who believe in just world are more inclined to believe that 'good things happen to good people' and 'bad things happen to bad people'. Therefore these individuals believe that if others are in trouble, it is because of their own fault.

Males were also blamed by many of the participants. For *e.g.* पुरुष प्रधान समाज जिम्मेदार है महिलाओं के उत्पीड़न के लिए लडकों को दी गयी छुट भी जिम्मेदार है। स्त्रियों को केवल भोग की वस्तु समझा जाता है इसलिए जरूरत है पुरुषों की सोच बदलने की।

Most of the participants also considered westernization of the society responsible for such cases. Irresponsible police and law are also blamed for sexual atrocities against women which could be explained by the component of motivation in Bandura's theory of modeling as when perpetrators look at the previous cases and not much action has been taken against accused; it encourages them to commit the crime.

In the themes under the causes and factors provoking such cases it was found that on the first place media (film and songs) are the main causes explained by the Bandura's Modeling theory as in the films it is shown that he starts flirting with the girl and then ends up with the love story between them. अभद्र चलचित्रों का प्रमुख रूप से कारक माना जा सकता है।

All of them said that laws are not strict enough for *e.g.*, ऐसे कृत्यों को रोकने के लिए न जाने कितने नियम हैं पर इन नियमों का पालन कड़ाई के नहीं होता। प्रशासन इन घटनाओं को जिम्मेदाराना ढंग से लेती है। इसे रोकने के लिए हमारे नियम बड़े ही शिथील हैं। And more than half of them said that provocative dresses are responsible. In the previous research it is proved that the dresses which women wear if it indicates that in some way they are asking for sex anyway it is responsible for the sexual violence against them is the most prevalent rape and sexual harassment myth. In this research also this myth seems to be prominent among youngsters. Still there is need to do more research on the attire of the victim to see how it affects the perception of sexual assault. In the previous researches also it was also seen that the women who dress themselves in revealing cloths are judged harshly and more promiscuous than who do not. Moreover, it is a common assumption that women should restrain their behaviour according to the societal norms of 'respectable femininity' (for example, Dress up properly, do not go out unaccompanied during late night) to avoid sexual desires and prevent such atrocities against them (Griffin, 1971; Roger and Gordon, 1979).

In suggestions participants demanded for ban on films as in WHO guidelines to avoid violence against women it is prescribed that everyone should avoid buying music and films that glorifies sexual violence and objectification of women and girls as objectification theory suggest that implicit or explicit sexual objectification of the female body can lead to negative consequences for them (Fredrickson and Roberts, 1997) (cf. Calogero, 2004). Moral education for boys to treat all the women and girls with respect and laws should be implemented strictly and no late nights for girls were some more suggestions to avoid sexual molestation.

In the nature of punishment more than half of the participants suggested for life sentence. Fieldman & Summers (1976) found that females perceive

sexual assault of women to be more serious crime and recommend longer jail sentences for the perpetrators. Majority of the participants advocated for life imprisonment आजीवन कारावास की सजा देनी चाहिए। few of them also suggested castration of sexual organs, death sentence and other punishments. As Non random sampling method was used and sample was smaller in number therefore the result cannot be generalized on the larger population. Intensity and space, time analysis was not used in the content analysis, otherwise a better picture could have been obtained. Inter coder reliability which means the degree to which different coders assign the same code to the segment of the text was also not analyzed.

IMPLICATIONS

Information provided in the paper can help reform policy and intervention directed at eve teasing and sexual molestation. Chairman and all the political leaders can be in relief as the causes or factors which they consider responsible were prominent in the result also. There are areas which can be explored in further researches like Methods of molestation, who are the molesters? Victim's reaction, on whom victims can rely? Consequences and effect, Coping strategies of the victims. These areas could be explored in further researches to understand this serious crime against women.

REFERENCES

- Barnett, M.A., Sinisi, C.S. and Quackenbush, S.W. (1991). Perception of a known rape victim: of a subject's gender Role and personal experiences with the rape. *The Journal of Social Psychology*, 131 (10): 139 -141.
- Calogero, R.M. (2004). A test of objectification theory: The effect of the male gaze on appearance concern in college women. *Psychology of Women Quarterly*, 28: 16-21.
- Doherty, K. and Anderson, I. (2004). Making sense of male rape: Construction of Gender, Sexuality and experience of rape victims. *Journal of Community and Applied Social Psychology*, 14: 85 -103.
- Feldman- Summers, S. and Linder, K. (1976). Perception of victims and defendants in sexual assault cases. *Criminal Justice and Behavior*, 3: 135-150.
- Fredrickson, B.L. and Robert, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risk. *Psychology of Women Quarterly*, 21: 173 - 256.
- Griffin, S. (1971). Rape: the all American crime. *Ramparts*, 10: 26-35.
- Heider, F. H. (1958). *The Psychology of Interpersonal relations*. New York : Wiley.
- Jewkes, R., Sen, P., Garcia-Moreno, C. (2002) Sexual violence. In: Krug E, Dahlberg LL, Mercy JA, Zwi AB, Lozano R, eds. *World Report on Violence and Health*. (pp. 148-181) Geneva, Switzerland: World Health Organization.
- Johnson, L.M., Mullick, R. and Mulford, C.L. (2002). General versus specific victim blaming. *The Journal of social Psychology*, 142 (2): 249-263.
- Kelly, H. H. (1967). Attribution theory in Social Psychology. In D. Levine (Ed). *Nebraska symposium on motivation*. Lincoln: Universty of Nebraska Press, pp. 192-238.

- Lerner, M.J. (1965). Evaluation of performance as a function of performer's reward attractiveness. *Journal of Personality and Social Psychology*, 1: 355-360.
- Lerner, M. J. and Simon, C. H. (1966). Observer's reaction to "innocent victim": Compassion or Rejection? *Journal of Personality and Social Psychology*, 4: 203 - 210.
- Riger, S. and Gordon, M.T. (1979). The structure of rape prevention beliefs. *Personality and Social Psychology Bulletin*, 5: 186-190.
- Srinivasan, A. (1998). Sexual Harassment. *Indian Journal of Gender studies*, 5: 115 - 125.

The
of
Hea
var
Pos
of
ana
bal
fro
org
Pra
eva
ana
2x2
dim
to
Sel
Cas
Typ
dim
ligh

* Ass
** Res
*** Res

IMPACT OF PRANAYAMA ON POSITIVE SELF-EVALUATION DIMENSION OF GENERAL MENTAL HEALTH AMONGST REGULAR AND CASUAL PRACTITIONERS

O. P. Sharma*, S. Bhardwas** and H. Tiwari***

ABSTRACT

The cardinal objective of the present study was to understand the Impact of Pranayama on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners structure of set of variables viz. Gender, Types of Pranayama and Regularity of practice on Positive Self-evaluation dimension of General Mental Health in dimension of General Mental Health. A purposive sample of 360 Literate Regular and Irregular Pranayama Practitioners from across diverse data with balanced number of Males and Females (25 to 60 years) was selected from Patanjali Yogapeeth, Haridwar and Yoga/Pranayama shivara organized in NCR and Rajasthan to sample the variables Gender Type of Pranayama, Regularity of Practice, General Mental Health (Positive Self-evaluation), and Regularity of Practice. Mental Health Inventory (Jagdish and Srivastava, A.K., 1983) was used. SPSS 17.0 was employed to compute 2x2x2 ANOVA to see the Effect of Pranayama on Positive Self-evaluation dimension of General Mental Health of Regular and Casual Practitioners to investigate the main effect of Gender (Male and Female) on Positive Self-evaluation dimension of General Mental Health in Regular and Casual Practitioners. The results obtain reveals significant main effect of Type of Pranayama and Regularity of Practice on Positive Self-evaluation dimension of General Mental Health. The results are discussed in the light of existing literature.

* Associate Professor, Department of Psychology University of Rajasthan, Jaipur
** Research Scholar, Department of Psychology University of Rajasthan, Jaipur
*** Research Scholar, Department of Psychology University of Rajasthan, Jaipur

Keywords: Casual Practitioners, Pranayama, Regularity of practice, Type of Pranayama, and Self-evaluation.

INTRODUCTION

According to the Yoga system, our breath is part of the cosmic energy (*prana*). The breath supplies motive power to all the parts of the body. When the breath is regulated and made rhythmic, the mind becomes calm. The first sign of an uncontrolled mind is irregularity of breathing. But *Pranayama* is a deeper and truer sense in much more than just control and regulation of breathing. The Sanskrit *Pranayama* is a compound word consisting of *prana*, which means vital force, and *ayama*, which indicates restraint. *Prana* is therefore not just breathing; it is cosmic energy. Breath is the gross manifestation of *prana*, which is subtle. Just as we are immersed in air, so we are immersed in *prana*. When we breathe in air, we are taking in both air and *prana*. *Prana* is ever awake and ever active in the body.

Prana is described in the sacred texts of Yoga and Vedanta as having five modifications, according to its five different functions. The names of the five modifications are *prana*, *apana*, *samana*, *udana*, and *vayana*. The functions of *prana* is respiration; of *apana*, excretion; of *samana*, digestion; of *udana*, swallowing of food, helping in sleep, and also separating the subtle body from the physical body at the time of death; and of *vayana*, circulation of blood. The seat of *prana* is the heart; of *apana*, the organs of evacuation; of *samana*, the area of the navel; of *udana*, the throat; while *vayana* is all-pervading and moves throughout the body, guarding it against disease and maintaining equilibrium.

Prana is the manifestation in each of us of the Cosmic Life Force. Through the physical act of breathing, the life force within each of us is in constant contact with the cosmic life force. Without our knowledge or conscious effort, the physiological process of inbreathing and out breathing is going on continuously day and night, during waking and sleeping. By exercising control over breathing, we can control *prana*. Control of *prana* leads to control of the mind because without *prana* the mind ceases to vibrate and comes to a standstill.

Pranayama forms an important part of the disciplines of Yoga for controlling the mind and awakening the spiritual consciousness. We have seen that according to Yoga, the mind never becomes controlled unless it is controlled consciously and this must be achieved by controlling the effects of the mind's restlessness. As we know, the restlessness of the mind is reflected in the restlessness of the body, the speech, and especially the breathing. So through fixed posture, observance of silence, and practice of *Pranayama*, the three effects are overcome.

Pranayama is known to improve pulmonary function (Malhotra and Singh, 2002) and cardiovascular profile (Singh et al, 2004; Harinath, Malhotra, Prasad, Kumar, Kain, Rai, Sawhney, 2004). A Buteyko breathing device, which mimics *Pranayama*, was shown to improve symptoms and reduce bronchodilator use in asthma patients. *Pranayama* has also been shown, over time, to reduce

oxygen consumption per unit work. "Kapalabhati", a fast breathing *Pranayama* technique, has been shown to promote decarboxylation and oxidation mechanisms in the lungs which is believed to "quiet" the respiratory centers. Alteration in information processing at the primary thalamocortical level inducing modification in neural mechanisms regulating the respiratory system may contribute to *Pranayama*'s beneficial pulmonary effects. In studies that examined *Pranayama* as a form of exercise, nostril breathing was shown to increase hand grip strength of both hands. *Pranayama*, by reducing risk factors associated with cardiovascular disease, has shown that it is not only therapeutic but also preventative. Reduction in oxidative stress levels with increased superoxide dismutase and decreased number of free radicals may explain in part the beneficial long-term impact *Pranayama* has on the cardiopulmonary system.

Pranayama is known to increase neural plasticity and to alter information processing making it a possible treatment for psychological and stress disorders for improving one's psychological profile (Harinath et al, 2004; Brown and Gerbarg, 2005). Higher improvement in IQ and social adaptation parameters were noticed in mentally retarded children after yogic training including *Pranayama* (Uma, Nagendra, Nagarathna, Vaidehi, and Seethalakshmi, 1989). Sudarshan Kriya Yoga, which includes *Pranayama*, has been used as a public health intervention for treatment of post traumatic stress disorder, depression, stress related medical illnesses, substance abuse, and rehabilitation of criminal offenders for its ability to enhance well being, mood, attention, mental focus, and stress tolerance (Brown and Gerbarg, 2005). In conjunction with other yogic techniques, *Pranayama* has been shown to decrease symptoms of irritable bowel syndrome by enhancing parasympathetic activity of gastrointestinal tract and by reducing effects of stress (Taneja, Deepak, Poojary, Acharya, Pandey, Sharma, 2004). It has been mentioned as a possible treatment for symptoms of epilepsy (Yardi, 2001) and has been shown to increase plasticity of motor control indicating that it might have applications in rehabilitation programs.

Different forms of *Pranayama* activate different branches of the autonomic nervous system effecting oxygen consumption, metabolism and skin resistance. *Pranayama* breathing, characterized by brief breath retention, caused significant increases in oxygen consumption and metabolic rate while *Pranayama* breathing, characterized by long breath retention, caused lowering of oxygen consumption and metabolic rate (Telles and Desiraju 1991). This demonstrates that slow breathing enhances parasympathetic activation. In another study using breathing exercises mimicking *Pranayama*, slow breathing over a period of three months was shown to improve autonomic function while fast breathing did not have an effect on the autonomic nervous system (Pal, Velkumary and Madanmohan, 2004). Slow breathing *Pranayama* exercises show a strong tendency of improving or balancing the autonomic nervous system through enhanced activation of parasympathetic nervous system. In contrast to slow *Pranayama* breathing, nostril

breathing, both through right nostril, left nostril, and both nostrils, has been shown to increase baseline oxygen consumption indicative of sympathetic discharge from the adrenal medulla (Telles, 1994). Contradictorily, left nostril breathing has been shown to increase volar galvanic skin resistance interpreted as a reduction in sympathetic nervous activity. Although nostril breathing and short *Pranayama* breathing practices are capable of altering the autonomic nervous system, more research is required to fully understand their clinical benefits. *Pranayama* may also affect the immune system. Inhibition of the sympathetic nervous system has been shown to enhance function of the immune system in several forms of meditation including mindfulness meditation, Qigong, and Transcendental meditation (Lee, Huh, Jeong, Lee, Ryu, Park, Chung, Woo, 2003; Takahashi, Murata, Hamada, Omori, Kosaka, Kikuchi, Yoshida, Wada, 2005). Since *Pranayama* has been shown to shift the autonomic nervous system away from sympathetic dominance (Pal, Velkumary, and Madanmohan, 2004) it is probable that *Pranayama* may have beneficial immune effects similar to meditation. More studies are needed to elucidate the direct effect of *Pranayama* on immune function.

Objective

The prime objective of the present study was to see the main and interactive effect of *Pranayama*, Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*), Regularity of Practice (Regular and Casual), Gender (Male and Female) and Type of Practitioner of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual), Gender (Male and Female) and Regularity of Practice (Regular and Casual) and Gender (Male and Female), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.

Hypotheses

- H₁ Gender (Male and Female) will have significant main effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₂ Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) will have significant main effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₃ Regularity of Practice (Regular and Casual) will have significant main effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₄ Gender (Male and Female) and Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) will have significant interactive effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.

Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.

- H₅** Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) will have significant interactive effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₆** Gender (Male and Female) and Regularity of Practice (Regular and Casual) will have significant interactive effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.
- H₇** Gender (Male and Female), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) will have significant interactive effect on Positive Self-evaluation dimension of General Mental Health amongst Regular and Casual Practitioners.

METHOD

Sample

A purposive sample of 360 literate *Pranayama* practitioners from across diverse strata with balanced number of Males and Females (age range 25-60 years) was selected for the present study. These *Pranayama* Practitioners were selected from Patanjali Yogpeeth, Haridwar and from various Yoga/*Pranayama* shiviras organized in Delhi and various cities in Rajasthan under the aegis of Yoga Guru Swami Baba Ram Dev and/or Patanjali Yogpeeth. Out of these 360 *Pranayama* Practitioners; 180 of them were practicing *Anuloma-Viloma Pranayama* and the remaining 180 were practicing *Kapalabhati Pranayama* since last 2 years with each respective category having balanced number ($N = 90$) of Regular and Casual Practitioners. The Regular Practitioner was operationally defined as the one who practiced the respective type of *Pranayama* daily at least for half-an-hour minimum and the Casual Practitioner was deemed to be the one who practiced the respective type of *Pranayama* only once in a fortnight for half-an-hour.

Tools

- 1. Mental Health Inventory (MHI)** (Jagdish and Srivastava, A.K., 1983): It has been designed to measure mental health of normal individual. It consists of 56 items in the final format. The reliability coefficients of its 6 dimensions positively self-evaluation, perception of Reality, integration of personality, anatomy, group-oriented attitudes, Environmental mastery and .75, .71, .72, .72, .74, .71, and .73 respectively. The concurrent validity of the scale was found to be .54.

Research Design

As the Independent Variables under study had already occurred and were inherently non-manipulative, the study being an Ex Post Facto research; so the

Research Design for the proposed study was a $2 \times 2 \times 2$ factorial one. The following variables were used:

Independent Variables

- Gender (Male and Female)
- Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*)
- Regularity of Practice (Regular and Irregular)

Dependent Variables

- Positive Self-evaluation dimension of General Mental Health

RESULTS AND DISCUSSION

In order to investigate the significance of main effects of Gender (Male and Female), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) on Positive Self-evaluation dimension of General Mental Health, the $2 \times 2 \times 2$ ANOVA with equal cell frequencies was computed to explain the partition of variance. The Table 1 reflects that Gender (Male and Female) has no significant main effect ($F = .10$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_1 i.e. Gender (Male and Female) will have significant main effect on General Mental Health in Regular and Casual *Pranayama* Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. It is also observed that Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) has significant main effect ($F = 14.96$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_2 i.e. Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) will have significant main effect on General Mental Health in Regular and Casual *Pranayama* Practitioners in the followers of Swami Baba Ram Dev stands accepted at 0.01 level of confidence specifically with respect to Positive Self-evaluation dimension of General Mental Health dimension and rival/alternative hypothesis is not tenable. It is also observed that Regularity of Practice (Regular and Casual) has significant main effect ($F = 3.85$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_3 i.e. Regularity of Practice (Regular and Casual) will have significant main effect on General Mental Health in Regular and Casual *Pranayama* Practitioners in the followers of Swami Baba Ram Dev stands accepted at 0.05 level of confidence specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is not tenable.

In order to investigate the significance of interactive effects of Gender (Male and Female) and Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual), Gender (Male and Female) and Regularity of Practice

(Regular and Casual) & Gender (Male and Female), Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) on Positive Self-evaluation dimension of General Mental Health in dimension of General Mental Health, the 2x2x2 ANOVA with equal cell frequencies was computed to explain the partition of variance.

Table 1: F-ratios for a 2x2x2 ANOVA for Positive Self-evaluation (General Mental Health)

Source of Variance	df	Sum of Squares	Mean Squares	F	Level of Significance
Main Effects-					
Gender	1	6.67	6.67	0.10	NS
Type of <i>Pranayama</i>	1	1016.74	1016.74	14.96	S(0.01)*
Regularity of Practice	1	261.80	261.80	3.85	S(0.05)**
Interaction Effects-					
First order Interactions-					
Gender x Type of <i>Pranayama</i>	1	2.03	2.03	0.03	NS
Type of <i>Pranayama</i> x Regularity of Practice	1	3.80	3.80	0.06	NS
Gender x Regularity of Practice	1	0.07	0.07	0.01	NS
Second order Interactions-					
Gender x Type of <i>Pranayama</i> x Regularity of Practice	1	0.03	0.03	0.01	NS

*Significant at 0.01 level.

** Significant at 0.05 level

The Table 1 reflects that Gender (Male and Female) and Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) has no significant interactive effect ($F=0.03$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_4 i.e. Gender (Male and Female) and Type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) will have significant interactive effect on General Mental Health in Regular and Casual *Pranayama* Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. It is also observed that type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) has no significant interactive effect ($F=0.06$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_5 i.e. type of *Pranayama* (*Anuloma-Viloma* and *Kapalabhati*) and Regularity of Practice (Regular and Casual) will

have significant interactive effect on General Mental Health in Regular and Casual Pranayama Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. It is also observed that Gender (Male and Female) and Regularity of Practice (Regular and Casual) has significant interactive effect ($F=0.01$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_6 i.e. Gender (Male and Female) and Regularity of Practice (Regular and Casual) will have significant interactive effect on General Mental Health in Regular and Casual Pranayama Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. It is again observed that Gender (Male and Female), Type of Pranayama (Anuloma-Viloma and Kapalabhati) and Regularity of Practice (Regular and Casual) has no significant interactive effect ($F=0.01$) on Positive Self-evaluation dimension of General Mental Health. It is ascertained that the hypothesis H_7 i.e. Gender (Male and Female), Type of Pranayama (Anuloma-Viloma and Kapalabhati) and Regularity of Practice (Regular and Casual) will have significant interactive effect on General Mental Health in Regular and Casual Pranayama Practitioners in the followers of Swami Baba Ram Dev stands rejected specifically with respect to Positive Self-evaluation dimension of General Mental Health and rival/alternative hypothesis is tenable. The results are vindicated by the studies of (Cowen, 2010; Takahashi et al, 2005; Pal, Velkum and Madanmohan, 2004; Salmon, Lush, Jablonski & Sephton, 2009; Kailash, Cavanaugh, 2007; Bhardwas, et al, 2013; Madnawat, Bhardwas and Bhardwas, 2013; Bhimani, Kulkarni, Kowale and Salvi, 2011).

LIMITATIONS & SUGGESTIONS

- The purposive sampling employed curbs the generalizability of results and hence limits the prediction of parameters of entire yogic population.
- Due to lack of control in post-hoc situations, it cannot be ensured that Pranayama practitioners (Anuloma-Viloma/Kapalabhati) did in a homogenous and precisely standardized manner.
- The researcher should have avoided Gender as independent variable (Factor) as it is parameter dependent.
- The error variance might have crept in results obtained and fidelity compromised because Yoga Guru Baba Ram Dev in his shivirs not only delivers yogic instructions but also mixes it with temporal socio-political discourses. Such breaching of "MaxMinCon Principle" may confabulate the results.

The patterns of mean differences in the interaction variances between A×C, and B×C variables as observed in the analysis of $2 \times 2 \times 2$ ANOVA measures of the dependent be highlighted by applying post hoc mean comparison.

As having least significant difference (LSD) for pair wise comparison between various levels. Significant ANOVA makes no attempt to control the type-I error. It's here remembered to use Bonferroni's and Tukey's tests to control the type-I error rate effectively. Here Tuckey's test is more powerful because here testing involves large number of means ($N > 20$). Besides the Ryan, Einor, Gabriel, Welsch Q Procedure (REGWQ) has good power and tight control of the type-I error rate. The future researches should take serious note of this fact.

Implications

Yoga is much more than a fitness program for the body and the mind. It can have deep emotional, social and spiritual implications in one's life. But, these aspects of yoga are almost never spoken about in mainstream media. Perhaps the reason for this is that such claims can hardly be verified in a scientific laboratory and because these results are unquantifiable, it is difficult to assess their value in our lives. And, science every individual experience is likely to be unique, it is hardly possible to draw generalized conclusion from them. This is why you almost never hear about how yoga can impact our day to day life and our overall experience of being alive. It is possible to make yoga one's way of approach to life.

The studies on Yoga especially *Pranayama* have serious ramifications for health, happiness, hope, harmony serenity, peace and blessedness. It will not only render yogic tradition on firm scientific footings but also universalize the Indological ancestral wisdom to the denizenary at large. Yoga and specially *Pranayama* are beneficial for comprehensive bio-psychosocial and spiritual health in a significant positive manner, not just curing the diseases. So Yoga and *Pranayama* can act as an effective deterrent against the onset of various disease and dysfunctions. As a primary prevention technique, Yoga and *Pranayama* are more relevant in developing countries lacking psychiatric infrastructure. It's also important in the Western world leaving in cubical, cultural, carpentered environment and 'Age of Anxiety'. The utopia of Alma Atta Conference aspiring Health for all can only be realized by resorting to yogic practice this is not only preventive, curative and cost-effective therapeutic tool but also a major regime for spiritual health. The health care needs of all can only be addressed by Yoga and *Pranayama*. Last but not least, the practice of Yoga and *Pranayama* will meaningfully support the heralding of a new psychocivilization in the age of perpetual conflict labeled as 'Electro-oligarchy vs. Psychocivilization' by Delgado.

REFERENCES

- Barlow, D. H. (2005). *Abnormal psychology: an integrative approach*. Belmont, CA: Thomson Wadsworth.
- Bhardwas, V.K. et. al., (2013). The effect of Pranayama on Personal and Planetary Wellbeing of Regular and Casual Practitioners in the followers of Swami Baba Ram Dev. (A paper accepted for publication in 4th coming issue of the journal Psychology in India).

- Bhimani, N.T., Kulkarni, N.B., Kowale, A. & Salvi, S. (2011). Effect of pranayama stress and cardiovascular autonomic tone & reactivity. *NJIRM*, 2 (1): 48-54.
- Brown, R. & Gerbarg, P. (2005). Sudarshan Kriya Yogic Breathing in the Treatment of Stress, Anxiety, and Depression: Part I—Neurophysiologic Model. In *Journal of Alternative and Complementary Medicine*, 11 (1): 189-201. Retrieved from PsychINFO 11/26/10.
- Cowen, V.S. (2010). Functional fitness improvements after a worksite-based yoga initiative. *Journal of Bodyworks & Movement Therapies*, 14 (1): 50-54.
- Harinath K., Malhotra A.S., Pal K., Prasad R., Kumar R., Kain T.C., Rai L., Sawhney R. (2004). Effects of Hatha yoga and Omkar meditation on cardiorespiratory performance, psychologic profile, and melatonin secretion. *J Altern Complement Med*, 10(2): 261-8.
- Jagdish & Srivastava, A. K. (1996). Manual of Mental Health Inventory. *Manovaijyana Parikshan Sansthan*, Varanasi, pp. 1-9.
- Kail, R.V., & Cavanaugh, J.C. (2007). *Human Development: A life-span view*. Canada: Thomson Wadsworth.
- Lee MS., Huh H.J., Jeong S.M., Lee H.S., Ryu H., Park J.H., Chung H.T., Woo W. (2003). Effects of Qigong on immune cells. *Am J Chin Med*, 31 (2): 327-35.
- Madawat, A.V.S., Bhardwas, V.K., and Bhardwas, S. (2013). A Factor Analytical Study of General Mental Health, Life Skills and Eco-Sensory Consciousness among Regular and Irregular Male and Female Pranayama Practitioners. *Indian Journal of Health and Well-being*, 4(5): 1083-87.
- Malhotra, V. and Singh, S. (2002). Study of yoga asanas in assessment of pulmonary function in NIDDM patients. *Indian J. Physiol. Pharmacol.*, 46: 313-320.
- Pal, G., Velkumary, S., and Madanmohan (2004). Effect of short-term practice of breathing exercises on autonomic functions in normal human volunteers. *Indian J. Med Res*; 120 (2): 115-21.
- Salmon P., Lush E., Jablonski M., & Sephton S.E. (2009). Yoga and mindfulness: clinical aspects of an ancient mind/body practice. *Cognitive Behavior Practice*, 16, 59-72.
- Singh, S. et al (2004). Role of yoga in modifying certain cardiovascular functions in type 2 diabetic patients. *J. Assoc Physician India*; 52: 203-6.
- Takahashi T., Murata, T., Hamada, T., Omori, M., Kosaka, H., Kikuchi, M., Yoshida, T. and Wada, Y. (2005). Changes in EEG and autonomic nervous activity during meditation and their association with personality traits. *Int. J. Psychophysiol*; 95 (2): 199-207.
- Taneja, I., Deepak, K.K., Poojary, G., Acharya, I.N., Pandey, R.M., Sharma, M.P. (2004). Yogic versus conventional treatment in diarrhea-predominant irritable bowel syndrome: a randomized control study. *Appl. Psychophysiol Biofeedback*; 29(1): 19-33.
- Telles, S., & Desiraju, T. (1991). Oxygen consumption during pranayamic type of very slow-rate breathing. *Indian Journal of Medical Research*, 94: 357-363.
- Uma, K., Nagendra, H.R., Nagarathna, R., Vaidehi, S., and Seethalakshmi, R. (1988). The integrated approach of yoga: a therapeutic tool for mentally retarded children: a one-year controlled study. *J. Ment. Devel. Res.*; 33 (5): 415-21.
- Yardi, N. (2001). Yoga for control of epilepsy. *Seizure*; 10 (1): 7-12.

LIFE SATISFACTION AND MENTAL HEALTH OF AGED WITH REFERENCE TO NORTH BIHAR

Anis Ahmad * and Gauri Shankar Singh**

ABSTRACT

The present investigation was undertaken to study the perceived life satisfaction and mental health of 60⁺ aged with particular reference to North Bihar. Total sample (N=200) comprising men (n=100) and women (n=100) were selected randomly from different area of locality of North Bihar. In this study the cities given priority for data collection were Darbhanga, Samastipur, Madhubani, Begusarai and Muzaffarpur. Life satisfaction Scale and Mental Health inventory were administered by contacting the subjects personally. Results revealed that life satisfaction was a function of mental health for both the group of aged men and women as positive correlations have been found. A significance of difference was also been found in terms of life satisfaction and mental health (dimensions-wise and overall) between the group of aged men and women, although, both the group have shown favourable inclination towards the degree of perceived reactions of life satisfaction. On the other hand, results also revealed that aged men had a higher degree of life satisfaction than aged women especially from where the sample has been drawn to undertake. The discrepancy in the results has been discussed in the light of exigency of situations prevailing in North Bihar.

Keywords: Life satisfaction, Mental disorders. Mental health,

INTRODUCTION

In the fast changing human spheres of life everything is undergoing a change, however, aging remains a matter of discussion not only in our own nation – India but throughout the globe. It is generally observed that life satisfaction is beneficial

* Associate Professor & Head, Department of Psychology, Millat College, Darbhanga – 846004, E-mail – anisdbg@gmail.com

** A.R.P, Bihar Education Project (S.S.A), Jilaprishad Campus, Begusarai - 851131

for mental health of men and women both and it results in lower risk of mental disorders such as anxiety, depression and substance abuse. Thus, it is now a well-established fact that life satisfaction and mental health go hand in hand. No doubt supportive relationships confer substantial mental health benefits. Similarly, the state of mental health of a person is presumed to be directly related to the understanding, love and trust which the person enjoys with his/her spouse.

By looking at the facts, present enquiry was aimed at studying the perceived life satisfaction and mental health of 60⁺ aged (men and women) with particular reference to North Bihar. The sample chosen for the present research work as it is still unexplored sample area hence, the area covered by present investigation is of utmost value and needs some special attention, not only of researchers but union and state governments too for the needful solutions of aged.

Life satisfaction is the way a person perceives how his or her life has been and how they feel about where it is going in the future. It is a measure of well-being as well as a cognitive, global judgment. It is having a favourable attitude toward one's life as a whole. Life satisfaction has been measured in relation to economic standing, amount of education, experiences, and the place of residence.

The terms life satisfaction, morale and happiness are often used interchangeably referring to psychological well-being of the individual. It is important to be mentioned that psychological well-being includes mental functioning such as happiness, morale, life satisfaction, and the absence of psychopathology (e.g. depression). George (1981) viewed life satisfaction as a cognitive process by which an individual assesses his/her progress toward desired goals. In addition to this George also defined happiness as "transitory moods of gaiety reflecting the affect that people feel toward their current state of affairs". Although, it is generally observed that all motivational spheres of life contribute a lot to an individual's life satisfaction which provides all round capacity with commitment of work and family too. An important study conducted by Neugarten, Havighurst and Tobin (1961), showed that zest, resolution and fortitude, congruence between desired and achieved goals, positive self-concept and mood constitute the psychological concept of life satisfaction. Palmore and Kivelt (1977) reported that the best predictor of life satisfaction is the person's ratings of life satisfaction in the past and that initial values or changes in other variables appeared to be unrelated to changes in life satisfaction. Moreover, Tave and Hansen (1962) point out that health problem appear to detract from enjoying a number of close friendships, satisfaction with work, and satisfaction with family whereas, various researches have shown that life satisfaction may also affect health when a person is dissatisfied with life, it means that an individual is experiencing negative emotions that are colouring his/her view of the world around him/her. There may be a relative lack of positive feelings states. Such dissatisfaction means important needs and expectations are not being met (Lawton, 1983).

A lot of researches on life satisfaction have been conducted so far and it has been found that happiness in old age depends to a great extent upon busy life, good health, absence of the feeling of paucity of funds and having spouse and social context which is witnessed from Anantharaman's (1979) study that investigated interrelations among adjustment – related factors in old age. In this study a positive correlation between activity and adjustment was found. Results showed that adjustment is positively related to education, occupation, income and social class. Self-rated physical/mental health and adjustment in life was also found positively related. Thus, life satisfaction among the aged is a function of several interrelated factors of adjustment. Harris (1975) presented both positive and negative statements on life satisfaction. In his study vast majority found that their past lives were satisfying; they had received what they expected out of life. The large difference was observed in terms of future. The aged were much less likely to have made plans for the future or to expect interesting and pleasant things to happen in the future, although, Medley (1976) gave a model depicting a causative chain between financial situation, health satisfaction with standard of living, satisfaction with family life and satisfaction with life as a whole. In this study, satisfaction with family was found to make the greatest impact on life satisfaction. Recently, Ahmad and Ahmad (2009) studied perceived life satisfaction of the aged university employees and found significance of difference between working employees and retired employees. It is very interesting to note that in their study both the group of employees have indicated favourable inclination towards their life satisfaction but working elderly employees were found to have higher life satisfaction than their colleagues who have retired from their job.

Review of literature shows that there are two approaches to life satisfaction. The first focuses upon the overt behaviour of the individual and uses social criteria of success or competence. The second approach is to be viewed from an individual's own internal frame *i.e.* the individual's own interpretation and evaluation of his/her present or past life, and his/her satisfaction/happiness with regard to mental health.

The concept of Mental Health is as old as human beings. Mental health refers to those behaviours, perceptions and feelings that determine a person's overall level of personal effectiveness, success, happiness and excellence of functioning as a person (Kornhauser, 1965).

Thus, the concept of mental health takes a 'Gestalt' view of the individual. It incorporates the concepts of personality characteristics and behaviour all in one. A mentally healthy person shows a homogenous organization of desirable attitudes, healthy values and righteous self-concept and scientific perception of the world as a whole. Mental health, however, is a contested and still much debated concept among psychologists and other behavioural scientists, with no universally accepted (Herron and Trent, 2000; Friedli, 2004; Warr, 1987) definition due to

the fact that mental health is multidimensional and value-laden. Several eminent psychologists namely, Erickson (1936), Rogers (1969) and Hurlock (1972) have expressed their ideas in the same way. A mentally sound or healthy person is viewed as a dynamic and conscientious person who is found to be reasonably rational in the choice of means for the realization of his/her pious ends (Anand, 1988). Hence, mental health is an attitudinal concept toward ourselves and others (WHO, 2000). It also presents a humanistic approach towards the understanding and assessment of the self positive feelings, attitudes towards self and others.

The term mental health has been categorized into two different broad categories known as positive and negative mental health. Mental health from a positive angle refers to behaviour, attitudes and feeling that reflect an individual level of personal effectiveness, success and satisfaction. According to Argyle (1951), persons with positive mental health should have the ability to understand the realities which exist both externally and internally when he/she strives to be aware of oneself. It is also important to be mentioned that mentally healthy persons are able to fulfill their social roles successfully. They enjoy peace of mind, happiness, self-confidence and others' companionship, whereas, negative mental health covers a wide variety of deep feelings including sorrow, disappointment, anger and empathy etc. (Emmons, 1992). O'Neill and Zeichner (1985) found that stress in the work environment has a negative impact on the physical and mental health of working women. Rastogi and Kavita (2001) found a significant negative relationship between occupational stress and mental health. Similarly, in an important study conducted by Johns, Sutton and Webster (1989) it was found that mental health is a condition of the characteristics of the average person who meets the demands of life on the basis of his/her own capacities and limitations. Lately, Ahmad (2013) studied mental health among private and government school teachers up to and found that private school teachers possess sound mental health as compared to government school teachers. Recently, the field of Global Mental Health has emerged as the area of study, where research and practice place a priority on improving mental health and improving quality in mental health for all people worldwide (Patel and Prince, 2010).

Review of literature on life satisfaction and mental health, showed that extensive researches have been conducted separately but none of the study on life satisfaction in relation to mental health of aged, especially in Indian context. Hence, the present study aimed at studying life satisfaction in relation to mental health of aged with particular reference to North Bihar. It is important to be mentioned here that the area of sampling chosen by the present investigators is yet unexplored area so; the findings of the study will definitely fill the void of knowledge in the area concerned. On the basis of broad objectives of the present study the following hypotheses were formulated:

1. There will be no significance of difference between aged group of men and women in terms of their degree of perceived life satisfaction.
2. There will be no significance of difference between aged group of men and women in terms their mental health (dimension-wise and overall).
3. Life satisfaction will not be a function of mental health among aged men and women.

METHOD

Sample

The present study was carried out on two hundred (N=200) 60⁺ aged men (n=100) and women (n=100). All the subjects included in the sample were contacted personally from different area of North Bihar. Major cities of North Bihar were given priority for the present piece of research work namely, Darbhanga, Madhubani, Samastipur, Begusarai, Sitamarhi and Muzaffarpur.

Tools

The following materials were used for the study:

1. *Life satisfaction scale* (Chadha & Van Willigen, 1995) :The scale consisted of 27 items based on Likert type 7-point scale in which 12 items are scored in reverse order i.e. 7 to 1 (for strongly disagree to strongly agree). In this scale higher score indicates high life satisfaction. This scale has been standardized by the author on Indian population and it has the split-half reliability of 0.87 and also has the face content and predictive validity of 0.82 which confirms the efficacy of the scale.
2. *Mental health inventory* (Jagdish and Srivastava, 1996): The inventory consisted of 56 items and each item was rated on 4 – point rating scale ranging from always to never with a score of 1 to 4. Inventory comprises of six dimensions such as, Positive self-evaluation (PSE), Perception of reality (PR), Integration of Personality (IP), Autonomy (A), Group Oriented Attitude (GOA), and Environmental Mastery (IM). In this scale high score indicates good mental health and low score indicates poor mental health. The reliability coefficients of different dimensions of mental health inventory were found to be more than 0.70 and moreover, the reliability coefficient of overall inventory was found 0.73 which confirms the efficacy of the inventory.
3. *Biographical information blank* (BIB). It includes personal information such as qualification, age, marital status, religion, sex, number of dependents, experience in the present position, income, etc.

Procedure

The above mentioned materials was administered individually to the sample to obtain the data and during data collection subjects were assured that the information provided by them on each item of the scales will be kept strictly confidential and will be used for research purposes only.

RESULTS AND DISCUSSION

The mean scores on life satisfaction and the comparison of the means of males and females has been shown in Table 1.

Table 1: Significance of difference in Life Satisfaction of aged men and women

Groups	Mean	SD	t- value	P
Men (n=100)	144.48	23.79	3.39	0.01
Women(n=100)	132.39	26.38		

The results obtained in terms of perceived life satisfaction reveal a clear picture regarding the significance of difference between the group aged men and women as the obtained t- value (3.39) has been found significant at 0.01 level. Hence the proposed hypothesis *i.e.* there will be no significance of difference between the group of aged men and women stands rejected.

Table 2: Levels of Perceived Life Satisfaction of aged Men and Women

Levels	Men		Women	
	N	Percentage	n	Percentage
High	46	46%	38	38%
Moderate	36	36%	42	42%
Low	18	18%	20	20%

Percentages of aged men and women's in terms of level of perceived life satisfaction were also computed. It is witnessed from the Table 2 that 46 percent of aged men have higher degree of life satisfaction in comparison to 38 percent of aged women. While 36 percent of aged men have moderate level of perceived reactions to life satisfaction, 42 percent of aged women have shown moderate level of life satisfaction which is comparatively higher than that of aged men. Moreover, 18 percent of aged men had low level of life satisfaction in comparison to aged women *i.e.* 20 percent. Thus it is evident that higher life satisfaction was reported by a larger percent of men in comparison to women.

The Means, SDs and t-values (Dimension-wise and its total) between aged men and women on Mental health have been shown in Table 3.

Table 3: Means, SD and t-values on Mental Health of aged men and women

Dimensions of Mental Health	Men (n=100)		Women (n=100)		t-values
	Mean	SD	Mean	SD	
Positive self-evaluation	29.3	2.14	31.8	2.78	7.10*
Perception of reality	23.8	1.88	19.5	1.75	16.60*
Integration of personality	33.4	5.23	30.4	2.78	5.04*
Autonomy	18.8	1.68	16.5	1.73	9.47*
Group - oriented attitudes	28.9	1.63	26.3	1.67	11.06*
Environmental competence	26.9	2.85	24.4	2.28	6.81*
Overall Mental Health	161.1	15.41	148.9	12.19	6.02*

* p<0.01

It is clear from the above table that the difference in the mean scores of both group have been found highly significant at .01 level of confidence on certain dimensions of mental health and overall score as the t-values for positive self-evaluation (7.10), perception of reality (16.60), integration of personality(5.04), autonomy(9.47), group orientated attitudes (11.06), environmental competence(6.81), total mental health (6.02) were found to be statistically significant. Hence, the hypothesis formulated that there will be no significance of difference in terms of the different dimensions of mental health and considering all, stands rejected.

Table 4: Relationship between Life Satisfaction and mental Health of aged Men and Women

Variable	Men		r	Women		R
	Mean	SD		Mean	SD	
Life Satisfaction	144.48	23.79	.87	132.39	26.38	.79
Mental Health	161.1	15.41		148.9	12.99	

Correlations were computed between the two variables, i.e. life satisfaction and mental health of aged men and women. Results show that there is positive relationship between life satisfaction and mental health as the correlation values $r = .87$ and $r = .79$ respectively has been found significant at .01 level of confidence for both the group of aged men and women. Thus, the hypothesis that life satisfaction will not be function of mental health for aged men and women also stands rejected.

In the light of the results obtained, it is important to point out that all the elderly of North Bihar belonging to Darbhanga, Samastipur, Madhubani, Begusarai and Muzaffarpur have shown quite favourable inclination towards their degree of life satisfaction. This is evident from the fact that they scored above average

on the life satisfaction scale, although, aged men scored higher in comparison to aged women (Tables 1 & 2). The present results seem to be quite logical as socio-cultural milieu of whole North Bihar is still traditional and modernization has not yet had an impact. Thus, all the elderly have shown favourable satisfaction towards their life. During the investigation it was observed that children were very much supportive and cared for the elderly. The children were educated and involved in different jobs and most of them were self-employed and catered to the needs and demands of the family. It may be the cause to have favourable degree of life satisfaction for both the group of men and women.

Apart from the above discussion, it is pertinent to be mentioned here that aged women have comparatively shown low life satisfaction than men. Basically, they want their children always be with them so we can say that aged women always suffer from temperamental poverty especially from where the present sample has been drawn and moreover lack of family members support as well but instead of these aged women also scored above higher degree on the life satisfaction score. Really they deserve a lot of credit in their whole life endeavours. The results presented here seem to be logical in the sense that males are always realistic and females are not. Aged women are away from naturalism because mirror reflexion is not there and it is due to seclusion.

Discussing the results of the results of the Table 3 regarding mental health (dimension wise and total) of aged men and women it could be observed from the table that on each dimension of mental health – positive self evaluation, perception of reality, integration of personality, autonomy, group oriented attitudes, environmental competence and over all mental health have been found statistically highly significant at .01 level of confidence where the mean scores of males are higher than females except on positive self evaluation. The result also seems to be logical in the sense that mental health as prevention and preservation provides opportunities are more for men in comparison to women, therefore they cultivate desirable attitudes and make adequate adjustment in various life situations. Moreover it has been experienced during the inquiry for the present piece of research work found that the aged (men and women) suffers many frustrations in his or her daily life experiences. They are dependent on others for the fulfillment of their wants and needs. It is because of these situations that significant differences were observed on each dimensions and overall of mental health. It is important to be mentioned here that various researches have emphasized that mental health emerged as the most significant predictors of life satisfaction, whereas Bray and Gunnell (2006) found life satisfaction and happiness was modestly associated with mental health. Thus, it seems that the result presented in table 4 clearly reveal that there is much relationship between life satisfaction and mental health among the aged men and women. In this context it is to be pointed out that there is several studies which indicate life satisfaction significantly correlates to health domains.

Before terminating the discussion it is important to stress on some of the observations experienced by the present researchers that during the period of aging people suffer from increasing social isolation or social disengagement. One type of social disengagement is less involvement with other people. This may be due to several reasons such as transfer of friends and acquaintances, deaths, moving in to a new place after retirement, as well as an increased interest in oneself. All these results in narrowing of social contacts, which is further narrowed due to decreased physical abilities and lack of transportation facilities. Their own family members are busy in pursuits of their own and have little time to spend with them which further increases the feeling of isolation in the aged living alone. It is an undoubtable fact that old age is a period when one is likely to feel useless and uncared for. This feeling of rejection and isolation is likely to increase further when the decision to live alone is not a matter of choice but enforced due to circumstances. Furthermore, mental health is now getting it's a deeper concern with some important positive characteristics of the aged men and women such as resilience and inner sense of coherence, the ability to make relationship to attach to others and to love the ability to think clearly including emotional matters, the ability to manage the emotions successfully and appropriately, and the capacity to have an accurate self concept and high self esteem thus in the recent past the field of global mental health have emerge and define as the area of study, research and practice that places a priority for improving mental health for all people world wide.

CONCLUSIONS

On the basis of the obtained results it is concluded that : Aged men and women in North Bihar, where from the sample has been drawn, have indicated favourable inclination toward the degree of perceived life satisfaction. Moreover, Significance of difference has been found between aged women and men in terms of their perceived life satisfaction.

Aged men were found to have a higher degree of perceived life satisfaction than their counterparts. On all six dimensions of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group oriented attitude, environmental competence and overall mental health between the aged men and women were found to be significantly different. In terms of mental health score in all the dimensions including total score aged men scored higher degree of mental health than aged women except in the 'positive self-evaluation', a dimension of mental health where women scored higher degree of mental health than men. When life satisfaction was correlated with mental health for both the group of aged men and women, life satisfaction was found to be a positive function of mental health for both the group of men and women. Observations have revealed the fact that all the people who live in North Bihar

from where the present sample has been drawn for the research endeavor, has a unique and traditional life cycle, thus every one in that socio-cultural milieu has high social values and work ethics and greater sense of responsibility with which they have their social and family affiliations. Instead of these there is a need to pay much more attention to the necessities of the aged women for maintaining sound mental health and healthy life satisfaction.

REFERENCES

- Ahmad, Anis (2013) Mental Health among Private Government School Teachers up to 10th Standards. *Mental Health – Risks and Resources*, Edited by Deepti Ho and Nov Rattan Sharma. Global Vision Publishing House, New Delhi, 125-146
- Ahmad, Anis & Ahmad, Fuzail (2009). Perceived life satisfaction of the aged university employees. *Journal of Community Guidance & Research*, 26 (3): 311-318
- Anand, S.P (1988). RCE Mental Health Scale. *Indian Educational Review*, 23 (1): 41-47.
- Anantharaman, R.N. (1979). Activity disengagement for successful age old age. *Journal of Psychological Researches*, 23 (2): 110-112.
- Argyris, C. (1951). *Integration of the Individual and organization*, New York: J. Wiley.
- Bray I & Gunnell, D. (2006). Suicide rates, life satisfaction and happiness as markers for population mental health. *Social Psychiatry and Psychiatric Epidemiology*, 41: 333-347.
- Chadha, N.K. & Van Willigen, J. (1995). The Life Scale: The development of a measure of successful aging. *Indian Journal of Gerontology*, 9 (3&4): 83-90.
- Emmon, R.A. (1992). Abstract vs. Concrete goals: Personal striving level, physical illness and psychological well-being. *Journal of Personality and Social Psychology*, 62: 292-300.
- Erickson, E. (1936). *Childhood and Society*. (2nd ed.), New York, Norton.
- Friedli, L. (2004). Mental health improvement 'concepts and definitions': Briefing paper for the National Advisory Group. Edinburgh, Scottish Executive.
- George, L.K. (1981). Subjective well – being conceptual and methodological issues. *Annual Review of Gerontology and Geriatrics*, C. Eisdorfer (Ed.) 2, Springer, New York.
- Harris, L., et al. (1975). The myth and realities of aging in America. *National Commission on Aging*. Washington, D.C.
- Herron, S. & Trent D.R. (2000). Mental health: A secondary concept to mental health illness. *International Journal of Mental Health Promotion*, 2: 29-38.
- Hurlock, E.B. (1972). *Child Development*, New York: McGraw Hill.
- Jagdish, and Srivastava (1996). Mental Health inventory. *Third Handbook of Psychological & Social Instruments*. Vol. 2. Concept Publishing Company, New Delhi.
- Johns, E.B., Sutton, W. & Webster, L.E. (1989). *Health of Effective Living*, New York: McGraw Hill Book Co.
- Kornhauser, A. (1965). *Mental Health of the industrial worker: A Detroit study*, New York: Wiley.

- Lawton, M. P. (1983). The Philadelphia geriatric center morale scale: A revision. *Journal of Gerontology*, 30 (1): 85-89.
- Medley, M. L., (1976). Satisfaction with life among persons sixty five years and older. *Journal of Gerontology*. 31, 448-455.
- Neugarten, B. L.; Havighurst, R.J. & Tobin, S.S. (1961). The Measurement of Life Satisfaction, *Journal of Gerontology*, 16, 134-143.
- O'Neill, C. P. & Zeichner, A. (1985). Working women: A Study of relationship between stress coping and health. *Journal of Psychosomatic Obstetrics and Gynecology*, 4(2), 105-116.
- Palmore, E. and Kivett, V. (1977). Change in life satisfaction: A longitudinal study of person aged 46 - 70. *Journal of Gerontology*. 32 (3): 311-316.
- Patel, V. & Prince, M. (2010). *Global mental health - a new global health field comes of age*. *JAMA*, 303: 1976-1977.
- Rastogi, R. & Kavita K. (2001). A study of occupational stress and mental health among married working women. *Journal of Community Guidance and Research*, 18(2): 189-196.
- Rogers, C.B. (1969). On becoming a person. Today's Teacher, all issues. Boston: Houghton Mifflin.
- Taves, M. J. and Hansen, G. D. (1962). Seventeen hundred elderly citizens. In A. M. Rose, ed., *Aging in Minneapolis Press*, Minnesota
- Warr P. (1987). A study of psychological well-being. *British Journal of Psychology*, 69: 111-21.
- World Health Organization (2005). *Promoting Mental Health: Concepts, Emerging evidence, Practice: A report of the World Health Organization*, Department of Mental Health and Substance Abuse in collaboration with the Victorian Health Promotion Foundation and the University of Melbourne. World Health Organization. Geneva.



Key
func

to e
This
age
is st

*
**

COMPARISON OF MEAN AND INTRA-INDIVIDUAL VARIABILITY SCORES ON REACTION TIME AS INDICES OF NEUROPSYCHOLOGICAL DYSFUNCTION

Indu Bala* and Amrita Yadava**

ABSTRACT

Previous studies have shown that intra-individual variability (IIV) in performance is an important indicator of neuropsychological functioning and neurological integrity. In the present study, the mean and IIV scores on reaction time (RT) were compared in order to find out which one was a more reliable index of neuropsychological dysfunction. A sample of 120 subjects was drawn from four age groups i.e. Adolescents (Group 1: 16 to 18 years); Adults (Group 2: 30 to 40 years); Older Adults (Group 3: 50 to 60 years) and Old aged (Group 4: 65 years and above.) ranging from 16 years to 65 years and above. Subjects were assessed on two measures i.e., reaction time task and AIIMS battery. Data was analysed by computing one way ANOVA and correlation. Analysis indicated that mean RT was a better index of neuropsychological dysfunction in comparison to intra-individual variability.

Keywords: Neuropsychological functioning, Intra-individual variability, Cognitive functions, and Neurobiological mechanism

INTRODUCTION

Researchers investigating neuropsychological functioning in individuals tend to examine their mean level of performance on different neuropsychological tasks. This type of research explains only the comparison across individuals of different age groups. However, such measurement assumes that individual's performance is stable over the short-term period. In 1991, Nesselroade explained in his research

* Research Scholar, Department of Psychology, M.D. University, Rohtak.

** Professor, Department of Psychology, M.D. University, Rohtak.

on life-span development perspective, that performance of an individual is constant fluctuation.

Recently, the term intra-individual variability (IIV) has been used to represent different facets of within-person variability. IIV is the standard deviation which represents trial to trial variability in performance of a task over a number of trials. "Intra-individual variability is defined as changes that occur relatively quickly and over relatively short term frames (e.g. moment to moment; week to week) and are temporary or reversible" Nesselroade (1991).

However intra-individual variability in RT is a peculiarly neglected phenomenon in experimental psychology, as RT has been considered in terms of the subject's mean response time. However, recent researchers in different psychology of RT have paid attention to intra-individual variability in RT. Researchers have found that increase in intra-individual variability in RT has predicted the degree of neuropsychological dysfunctioning (Hilborn, Hultsch, Hunter, Strauss, 2009; Hultsch, Hunter, MacDonald, & Strauss, 2005).

Hendrickson (1982) explained that IIV or inconsistency in RT is caused by random error or neural noise in the signals in the central nervous system. Some researchers reported that increase in IIV in cognitive functions reflect neuro-pathological changes associated with neurological aging and disease (Bonder, Buckle, Pogue, & Stuss, 1994; Li & Lindenberger, 1999). Several studies reported an increased IIV on RT in many conditions which affected the central nervous system, such as traumas, (Armilio, Craik, Murphy, Stuss, & West 2000), dementia (Hultsch, Hunter, Levy-Bencheton, MacDonald, & Strauss, 2000), neurodegenerative diseases like Alzheimer's, Parkinson disease (Burton, Hultsch, Hunter, Moll, & Strauss, 2006).

Researchers found that decrease in the level of performance and increase in inter-individual variability with age was associated with higher IIV. A neurobiological mechanism (Hale, Myerson, Poon, & Smith, 1988; Welford, 1980). Older adults when compared with younger adults, exhibited greater IIV. Researchers reported that inconsistency across trials on RT tasks, increases with age (Anstey, 1999; Fozard, Hancock, Quilter, Reynolds, & Verduysen, 1994). Some researchers, however, have not observed an association of intra-individual variability among some cognitive domains such as reasoning, perceptual speed, and memory. Allaire & Marsiske (2005) explained that any observed inconsistency or IIV across measures may be due to shared underlying processes such as processing speed.

In Psychometrics, reaction time is considered to be a measure of cognitive processing speed. The speed of execution of mental processes needed for performing a task can be assessed by RT. Reaction time test is a simple and sensitive test which is a measure of how rapidly information can be processed and a response to it can be activated (Duncan, 1986). RT tests provide high

sensitivity for detecting fluctuations in neuropsychological efficiency. It has been known that as the individual ages, RT becomes more variable and longer. Some researchers implicated RT as the predictor for early detection of Alzheimer's disease and mild cognitive impairment (De Raedt, Gorus, Lambert, Lemper, & Mets, 2008). Neubauer and Knorr (1997) observed that the speed of information processing is significantly correlated with intelligence, especially in choice RT tasks.

Although IIV appears to be a meaningful indicator of an individual's neuropsychological dysfunctioning, one question often raised in the literature is whether it is necessary to examine IIV if it accounts for the same amount of inconsistency on neuropsychological functioning as mean level of performance. Researchers have found that IIV on RT tasks appears to be a better indicator for differentiating individuals with mild cognitive impairment and dementia from normal individuals, in comparison to mean RT scores (Burton et al., 2006; Bielak, Bunce, Hultsch Hunter, & Strauss, 2007). Strauss and his colleagues (2007) reported that intra-individual variability on RT tasks also appears to be beneficial in classifying the severity of neuropsychological dysfunction.

Previous researches show that neuropsychological functioning (NPF) varies with age. NPF tasks are very complex and lengthy. These are very time consuming as well as very complicated and at times the respondents are unable to perform all of them. Therefore, in view of the above the present study proposes to compare the efficacy of mean and intra-individual variability scores on RT tasks as indicators of neuropsychological dysfunction.

The objective of the present study was to compare Mean and IIV scores on RT among different age groups and study the relationship between Mean and IIV scores on RT with neuropsychological functions (NPF) across age.

METHOD

Design

To fulfil the objectives of the study a multi group design with four groups was used to examine the association between Mean and intra-individual variability scores on RT with neuropsychological dysfunction across four age groups.

Sample

A sample of 120 respondents was selected (age range: 16 years to 75 years). Variables such as educational qualification, health status were controlled by inclusion/ exclusion criterion. Participants were divided into four age groups. Group 1 (n=30; 15 women, 15 men) ranged from 16 to 18 years; Group 2 (n=30; 11 women, 19 men) 30 to 40 years; Group 3 (n=30; 10 women, 20 men) 50 to 60 years and Group 4 (n=30; 5 women, 25 men) 65 years and above. All groups were educated, however, Group 2 and Group 3 had significantly more education than the last group *i.e.*, Group 4. Although all the age groups had normal health,

the fourth age group in which respondents were above the age of 65 years, some health issues like hypertension, diabetes and heart problems.

Tools

To obtain the demographic information (age, years of education, self-reported health information, self-rated health, perceived memory changes and self-reported chronic disease conditions) a semi-structured questionnaire was used.

Reaction time Apparatus: RT was assessed by RT apparatus, which consisted of rectangular box with four lights on the respondents' panel, where half an inch below each light there was a pushbutton. On the experimenter's panel there was a start button. There was another switch with the help of which experimenter could select the light to be presented to the subject. After an auditory ready signal one of the lights was switched on by the experimenter. Subject was required to turn off the light as quickly as possible by pressing the pushbutton. Reaction time was recorded by the inbuilt chronoscope which provided a digital display on the experimenter's side of the instrument. For each subject 65 trials were taken in which 5 trials were catch trials. RT task was administered in 3 test sessions, with an inter-test interval of about 4-6 weeks, scheduled over a period of 3 months. Mean and Standard Deviation scores were computed for each session.

For computation of IIV, deviation scores were calculated across the trials and three sessions.

AIIMS neuropsychological battery: AIIMS neuropsychological battery is a comprehensive battery used for both diagnosis and rehabilitation. It helps to understand the brain-behaviour relationship. It measures ten different primary scales; motor, tactile, visual, receptive speech, expressive speech, reading, writing, arithmetic, memory and intellectual processes. From out of these basic component scales, three other scales i.e. pathognomonic scale, Left-Hemisphere scale, and Right-Hemisphere scale can be constructed. In the present study the Total Neuropsychological score comprising of the total of raw scores on all the above scales was used. The receptive speech scale is not included in the total score scale. The total number of items on the above scales are 200. Total Raw scores on 12 scales (motor, tactile, visual, expressive speech, reading, writing, arithmetic, memory, intellectual processes, pathognomonic, left-hemisphere, & right-hemisphere) were then converted into T-scores for each subject of different age groups.

Procedure

The participants were selected from college students/staff, and institutionalized aged population in Gurgaon and Rewari districts. Participants who voluntarily agreed to participate in the study were administered the three measures, i.e.

measure of personal information, measure of RT, and measure of neuropsychological functioning, at their residence.

RESULTS AND DISCUSSION

For the analysis, first of all the mean reaction time and the standard deviation are calculated. Mean reaction time is the measure of how fast the individual responds whereas standard deviation measures the intra-individual variability of an individual's reaction time. For the analysis of NPF raw scores of an individual are converted into T scores.

Table 1: Means RT, IIV and NPF scores of the four groups(n=30)

Groups	RT Scores	IIV Scores	NPF Scores
Group 1	.12963	.03230	55.17
Group 2	.13870	.03327	50.87
Group 3	.16679	.03569	57.97
Group 4	.18850	.04255	72.37
Overall	.15575	.03595	59.09

From Table 1, it can be seen that there is a progressive increase in the mean scores on RT and IIV, where the means of the first two groups are nearly similar and there is very slight difference while the means are progressively higher for the two higher age groups (3 and 4) which indicates that individuals above the age of 50 years are more slower and more variable in their performance than the younger age groups. On the NPF score, the respondents up to the age of 50 years (Groups 1,2&3) appear to be similar, while the mean score of Group 4 is much higher. This indicates that respondents above the age of 60 years have more neuropsychological dysfunction.

To examine if there is any difference across age groups in RT, IIV, and NPF analysis of variance (ANOVA) was used and F values were shown in Table 2.

Table 2: Significance of difference among the RT, IIV, and NPF scores of the four groups.

Sr.No.	Variable	F Value
1	RT	32.614**
2	IIV	1.962
3	NPF	36.183**

**p<.01

The obtained value of F was found to be significant for RT and NPF. In order to determine which of the groups differed significantly, post hoc analysis was carried out by applying LSD.

The post hoc analysis of the three measures revealed that the mean RT score of Group 3 was significantly different from Group 1 (.04313) and Group 2 (.05902). The mean RT score of Group 4 was significantly different from all the three groups. On the other hand, comparison of the IIV scores revealed a significant difference only for Group 4 with Group 1 (.01018) and Group 2 (.00930).

Table 3: Significance of difference between the RT, IIV, and NPF scores of the four groups.

Comparison groups	Mean Difference		
	RT	IIV	NPF
1 and 3	.04313*	-	-
2 and 3	.03410*	-	-
1 and 4	.05902*	.01018*	17.20*
2 and 4	.04999*	.00930*	21.50*
3 and 4	.01589*	-	14.40*

* $p < 0.05$

The mean differences between the NPF scores of Group 4 significantly differed from all the three groups which indicates that individuals who are above the age of 65 years have very high reaction time, which indicates that their cognitive speed is slow and they have more neuropsychological deterioration than any other age group.

In order to ascertain which of the two measures *i.e.* mean RT or IIV was a better index of neuropsychological functioning, correlation was computed for both the scores with NPF scores.

Table 4: Correlation between RT- NPF and IIV- NPF.

Groups	Correlation Between	
	RT & NPF	IIV & NPF
Group 1	.312	-.193
Group 2	.281	.132
Group 3	-.274	-.219
Group 4	.375*	.409*
Overall	.484**	.287**

* $p < 0.05$; ** $p < 0.01$

After ascertaining that obtained data met the requirements of Pearson correlation, correlations were computed between the RT-NPF and IIV-NPF scores. The obtained correlations are reported in the Table 4. For RT-NPF and IIV-NPF correlations were significant only for the Group 4 *i.e.* .375 and .409 respectively. Overall correlations for RT-NPF (.484**) and IIV-NPF (.287**) were also computed and both were positively correlated.

When correlations are compared it can be concluded that both RT and IIV are equally effective in indicating gross neuropsychological dysfunction but as RT has shown high correlation with NPF as compare to IIV for the total sample, it indicates that RT, or mental speed is a better index of neuropsychological dysfunction. Therefore, present study indicates that mean RT is a better index of neuropsychological dysfunction rather than IIV.

The present results are consistent with previous researches (Anstey, 1999; Fozard et al., 1994; Hogan, 2003; Dixon, Hultsch, & MacDonald, 2002), which reported that older adults show greater intraindividual variability in RT performances than younger adults. The correlations between IIV and NPF observed in the total sample supports the view that increase in IIV could indicate the integrity of central nervous system and can be considered as a risk factor for mortality (Alexander, Binns, Murphy, & Stuss, 2003; West et al., 2002).

In present study an attempt was made to find out that whether Mean RT or IIV on RT task is a better index of neuropsychological dysfunction. Both mean RT and IIV are significantly correlated with NPF scores in the 65+ age group and there is very little difference in the two values. However, correlation for the total sample is much higher for men RT. Therefore, it can be concluded that mean RT is a better index of neuropsychological dysfunction.

IIV in RT does not appear to be a very good index of neuropsychological dysfunctioning. However, mean RT, specifically visual complex RT, was found to be a good index of neuropsychological dysfunctioning. Thus, it appears that a single measure of mean Reaction Time could be profitably used for assessing gross neuropsychological dysfunction.

REFERENCES

- Allaire, J.C. & Marsiske, M. (2005). Intra-individual variability may not always indicate Vulnerability in elder's cognitive performance. *Psychology & Aging*, 20(3): 390-401.
- Anstey, K.J. (1999). Sensorimotor and forced expiratory volume as correlates of speed, accuracy, and variability in reaction time performance in late adulthood. *Aging, Neuropsychology, and Cognition*, 6(2): 84-95..
- Burton, C. L., Hultsch, D. F., Moll, A., Hunter, M. A., & Strauss, E. (2006). Intra-individual variability as a Marker of Neurological Dysfunction: A Comparison of Alzheimer's Disease and Parkinson's Disease. *Journal of Clinical and Experimental Neuropsychology*, 28(1): 67-83.
- Duncan Luce, R. (1986). *Response Times: Their Role in Inferring Elementary Mental Organization*. New-York: Oxford University Press.
- Fozard, J. L., Hancock, P. A., & Quilter, R. E. Verduyssen, M., & Reynolds, S.L. (1994). Age differences and changes in reaction time: The Baltimore Longitudinal Study of Aging. *Journal of Gerontology: Psychological Science*, 49(4): 179-189.
- Gorus, E., Lambert, R., Lemper, J.C., Mets, T., and De Raedt, R. (2008). Reaction times and performance variability in normal aging, mild cognitive impairment, and Alzheimer's disease. *Journal of Geriatric Psychiatry Neurology*, 21(3): 204-218.

- Hale, S., Myerson, J., Poon, L. W., & Smith, G. A. (1988). Age, variability, and between-subjects diversity. *Psychology and Aging*, 3(4): 407-410.
- Hendrickson, A.E. (1982). The biological basis of intelligence. Part I: Theory. In Eysenck (Ed.), *A Model For Intelligence*, 151-196. Berlin: Springer-Verlag.
- Hilborn, J.V., Hultsch, D.F., Hunter, M.A. & Strauss, E. (2009). Intra-individual variability across cognitive domains: Investigation of dispersion levels and performance profiles in older adults, *Journal of Clinical & Experimental Neuropsychology* (4): 412-424.
- Hogan, M.J. (2003). Average speed or variable speed-what do older adults need? *Irish Journal of Psychology*, 24(3-4): 161-183.
- Hultsch, D.F., MacDonald, S.W.S., & Dixon, R. A. (2002). Variability in reaction time and performance of younger and older adults. *Journal of Gerontology, Series Psychological Sciences and Social Sciences*, 57B (2): 101-115.
- Hultsch, D.F., Hunter, M.A., MacDonald, S.W.S., & Strauss, E. (2005). Inconsistency in response time as an indicator of cognitive aging. In J. Duncan, L. Phillips & P. McLeod (Eds.), *Speed, Control and Age: In order of Patrick Rabbit* (32). New York; Oxford university press.
- Hultsch, D.F., Levy-Bencheton, J., MacDonald, S.W.S., Hunter, M.A., & Strauss, E. (2000). Intraindividual variability in cognitive performance in older adults: A comparison of adults with mild dementia, arthritis & healthy adults. *Neuropsychology*, 14 (4), 588-598.
- Li, S.-C., & Lindenberger, V. (1999). Cross level unification: A computational exploration of the link between deterioration of neurotransmitter system and differentiation of cognitive abilities in old age. In L.-G. Nilsson and M. Markowitsch (Eds.), *Cognitive Neuroscience of Memory*, 104-146. Toronto: Hogrefe & Huber.
- Nesselroade, J. R. (1991a). Interindividual differences in intraindividual changes. In M. Collins & J. L. Horn (Eds). *Best methods for the analysis of change: Recent advances, unanswered questions, future directions* (pp. 92-105). Washington DC: American Psychological Association.
- Neubauer, A.C. & Knorr, E. E. (1997). Elementary cognitive processes in choice reaction time tasks and their correlations with intelligence. *Personality and Individual Differences*, 23 (5), 715-728.
- Strauss, E., Bielak, A. A. M., Bunce, D., Hunter, M. A., & Hultsch, D. F. (2007). Within person variability in response speed as an indicator of cognitive impairment in older adults. *Aging, Neuropsychology, and Cognition*, 14 (6): 608-630.
- Stuss, D.T., Buckle, L., Bondar, J., & Pogue, J. (1994). Characterization of stability of performance in patients with traumatic brain injury: Variability and consistency on reaction time tests. *Neuropsychology*, 8 (3), 316-324.
- Stuss, D.T., Murphy, K.J., Binns, M.A., & Alexander, M.P. (2003). Staying on the job: The frontal lobes control individual performance variability. *Brain*, 126 (11): 2361-2380.
- Welford, A.T. (1980). Relationships between reaction time and fatigue, stress, age, and sex. In A.T. Welford (Ed.), *Reaction Times* 321-354. New-York: Academic Press.
- West, R. L., Armilio, M. L., Craik, F. I. M., Murphy, K. J., & Stuss, D. T. (2002). Lapses of intention and performance variability reveal age-related increases in fluctuations of executive control. *Brain and Cognition*, 49 (3): 402-419.

BOOK REVIEW

PERSONALITY ENHANCEMENT

By Prof. Anup Malhotra

Global Vision Publishing House, New Delhi, 2013

Rs. 1200/-, ISBN: 978-81-8220-580-2



The present book *Personality Enhancement* edited by Prof. Anup Malhotra is a collection of various essays that concentrate on the theories and methods of personality development. The first chapter acts as an introduction that defines the importance and the role of personality development in the cultivation of the character of an individual. Liza Sharma aptly defines personality as an outward exposition of the inner man. The process of personality development starts right from a child's birth that enhances the behavioural traits like communication skills, interpersonal relationships and our attitude towards life. Besides this, there are some other personality traits such as body language, self-confidence, positive attitude, decision-making and interactive skills that are the key ingredients to enhance the all-round personality.

Part I elucidates the concept of self and the relevance of other social or environmental factors responsible for the formation of self-image. It can be said that the self-image is not entirely based on one's conception of oneself rather it is shaped and reshaped by various kinds of outward forces. The process of socialization instills confidence in a person which is the basic element in the development of one's personality. It would be no exaggeration to state that self-confidence is the foundation stone that can bear the burden of all other traits of personality development. But it becomes a necessity on the part of a person that this foundation of self-confidence must be strong enough so that it can tactfully

hold and strengthen the grip of other bricks of personality development as well. Self-confidence is important in all walks of life whether it being business, social interaction or happiness. The thing that must be noted is that self-confidence remains a powerful weapon of personality till it is balanced but the moment it becomes more bulky, it is labeled as over-confidence which can lead a person towards his own destruction. So it needs to be balanced properly. Life must be around enjoying the joyful as well as sorrowful moments whereby those people who take or observe their life experiences negatively tend to destroy not only their own personality but of others' as well, whereas on the other hand the people having positive attitude to life easily adapt themselves in any of the circumstances and embellish theirs as well as other's life with all happiness. There are five steps to happiness enlisted in the fourth chapter that can help a person to adopt positive thinking towards life. The soft-skill programmes that are undertaken to improve personality must be based on anecdotes. Secondly, injecting humour in the sessions increases participation and makes the sessions more interactive and interesting. In order to make the participation more interactive demonstrations must also be implemented.

Part II is devoted to different attitudes, motivation and self-motivation. Right attitudes are responsible for success. Right attitude means to follow the right path, the ideal path. There are some "Do's and Don'ts" which must be taken care of. A right attitude also means to arrive at right decision or to act sensibly at right time. Chapter seven tries to analyze the relationship of occupation and women ageing in Nashik city through the statistical data collected by the author. The conclusion at which she arrived is that many working women have different personalities and it has nothing to do with their spending on personal care. Self-motivation being an important mechanism helps us to achieve our goals with any outward motivation. It strengthens the very spirit which nourishes self-confidence. Basically, motivation is of two types *i.e.* self or internal motivation and external motivation. Motivation is the fuel of life. The word "motivation" is derived from the Latin word "movere" that means "to move" and in this sense "motivation" refers to motives in action. It is actually concerned with personal energy directed towards the achievement of particular goals. It must be implemented in the teaching-learning process which intrinsically motivates students to retain information and concepts for a longer duration.

Part III, *i.e.* "Leadership Quality" is entirely focused on leadership development that is equated with self-development. Leadership is the capability to guide and influence the fellow beings and colleagues. This quality must be used to boost up the confidence of others, to inspire people to carry on despite the repeated failures and to energize them to work well. It must radiate only positive energies. An ideal leadership is that which is based upon the foundation of selflessness. Leadership is divided into five types, *i.e.* Autocratic/Authoritarian

Participative/Democratic, Laissez faire/Free Rein, Transactional and Transformational, etc. It is a sum total of the following soft-skills such as communication skills, listening skill and motivation skill. A leader must play a pivotal role in maintaining the unity in the team. For the clarity of leadership qualities, the leadership traits of Osama and Obama have been compared in chapter sixteen. Next chapter negates the old saying that "a leader is born, not made". Due to the modern management system it has been proved that leadership is an ongoing learning process that gets refined in the course of time.

Part IV focuses itself on the topic "Emotional Intelligence" by enumerating its importance in the present scenario. Emotional intelligence is the conscious management of our own emotions which includes perceiving emotions, facilitating thought with emotions, understanding and regulating emotions. It influences the actions of a leader, influencing thereby the work done as well as the result. Although business meetings are carried out using the modern technological and scientific devices but still the success of a company is not based on possessing all these high-tech accessories rather it is due to the emotional ethics or intelligence. It is because the Emotional Quotient is based on the concept of love and spirituality in an organization which is the minimal necessity even in management. The next chapter in this section aims at tracing the ancient ways to develop emotional intelligence in our epics.

Part V makes us aware of the assertive behaviour and behaviour skills. It explains various features and types of human behaviour and how it must be tackled and improved upon. Chapter twenty three tends to describe assertive behaviour and why is it necessary to be assertive? This is not a born quality but is acquired with a learned skill. And an individual must be trained to have an assertive identity from the early stages of his personality development so that he/she may easily face the difficulties without feeling any anger and resentment. The next chapter defines what it is to be assertive and why is it needed? It is essential, it says, for a person to fight and face his/her own battles and problems by removing all kinds of fears from his/her mind. It discusses the three styles of behaviour – passive, aggressive and assertive and the benefits of being assertive. Chapter twenty five discusses how the gender influences the assertiveness, the differences in assertive behaviour of males and the females and the reasons behind it. It also evaluates the assertive and aggressive qualities in males and females their score count. The next chapter examines the nature of the behaviour of consumers towards their environment and proposed a model and hypothesises how various factors such as notions, changes and attitudes and other intervening variables influence the intentions and decisions of the consumer while purchasing environmental products. Then this section provides a view in the neurological processes and how our senses may affect our states of mind and how their "grooming" may help in mastering our behaviour. The last two chapters devote their study on the

impact and use of IT applications and internet and E-learning in the maintenance of good behaviour and better personality of an individual in a society.

Part VI focuses on the topic "Personality and Performance" describing how the college education may help the students in the acquirement or acquisition of necessary skills to find employment in better companies. It mainly deals with the benefits of effective business and management skills acquired in good Business schools or colleges and instilling good soft skills, team-spirit and skills in management and computer training etc. in the aspirant students. It also attempts to assess various challenges faced by an organization, and analyze various practices that are prevalent in business organizations to retain and motivate the key staff.

It is a comprehensive collection, largely exhaustive in scope and application. However, human personality cannot be gauged on the basis of tests, attributes, physical appearance or mental acumen. Life keeps on adding new experiences, episodes, and ideas making the personality multi-layered. The book is an effort to analyze these layers. In a cogitative manner, the writers have endeavoured to assess all the facets of personality and how different methods can accentuate the optimum potential. The book has delved on various segments such as work-life balance, women, leadership qualities, the importance of E. Q., the gendered perspective of assertiveness and issues related to the corporate domain. It would be valuable to include chapters on the youth, especially those from the deprived section of society as personality enhancement is a much expedient tool for them. So also a chapter dedicated to non-working women and personality enhancement would be a welcome edition.

Sonia Malhotra

Professor, Dept. of Psychology

M.D. University, Rohtak

BOOK REVIEW

BASICS OF GUIDANCE AND COUNSELING

By Dr. Shah Alam

Global Vision Publishing House, New Delhi, 2014

Rs. 1200/-, ISBN: 978-81-8220-624-3



Guidance and Counseling a helping profession desires to bring about changes in knowledge, attitudes and behaviour of individuals employed in different sectors. This book having 25 chapters has been classified into four important parts. Dr. Alam, very prudently has made divisions in this books beginning from guidance (Part-I), counseling's (Part-II), psychotherapy (Part-III) and psychological testing (Part-IV).

Part-1 deals with the basics of guidance as about it historical development, goals and purposes, Principles and procedures and what type of activities should be accomplished in order to make any guidance programme effective whether it is in some educational set-up, hospital or some corporate house.

Counseling (Part-II) in itself is a complete and informative section. It in encompasses processes and types of counseling, special areas of counseling *i.e.* Rehabilitation. Drug abuses, depression, handicapped segment. The entire planning and suggested therapeutic models are very simple and easy to comprehend.

Section III focuses on various theories and approached of counseling. All the therapies focusing upon their view of human nature, goals, processes and procedures are explained along with their recommendations and limitations systematically.

Part-4 focuses on the assessment part, *i.e.* Nature of psychological tests, their uses and characteristics. Non testing techniques that are currently in vogue have also been dealt with very meticulously.

This book is a significant contribution for the students, researchers, academicians and practitioners working in this field. The book is informative, knowledgeable and perfect piece of wisdom in terms of content and parsimonious language. I hope readers would find the book quite beneficial and quick to understand.

Shalini Singh

Prof. of Psychology

MDU, ROHTAK

E-mail: shalinisinghpsy@gmail.com

Books on Psychology

Basics of Guidance and Counselling ISBN: 978-81-8220-624-3	Dr. Shah Alam	Rs. 1200
Comprehensive Capsule of Psychology ISBN: 978-93-81695-28-9	Masood-ul-Hassan, T. Ahmad & Prof. Shamim A. Ansari	Rs. 495
Chastity and Modesty ISBN: 978-81-8220-611-3	K.L. Kerber	Rs. 900
Sex and Society ISBN: 978-81-8220-618-3	K.L. Kerber	Rs. 1300
Psychology of Language Learning ISBN: 978-81-8220-636-6	Wallace E. Lambert	Rs. 890
Global Encyclopaedia of the Theoretical Psychology (4 Vols. Set) ISBN: 978-81-8220-524-6 (Set)	Moazziz Ali Beg & Sangeeta Gupta Beg	Rs. 16000
Principals Leadership Behaviour of Education Colleges ISBN: 978-81-8220-511-6	Noorjehan N. Ganihar Rajeshwari G. Teggi	Rs 1200
Biopsychosocial Issues in Positive Health ISBN: 978-81-8220-491-1	Amrita Yadava, Deepti Hooda and NovRattan Sharma	Rs. 2200
Yoga and Meditational Psychotherapy ISBN: 978-81-8220-482-9	N.K. Singh	Rs. 900
Theory of Communication: Psycho-Social Behaviour ISBN: 978-81-8220-409-6	Dr. S.K. Mittal	Rs. 1950
Human Aggression Theory, Research and Intervention ISBN: 978-81-8220-430-0	Sunil Saini and Neelam Goyal	Rs. 1200
Positive Psychology ISBN: 978-81-8220-414-0	Ed. By Dr. Sunil Kumar Dr. S.B. Yadava	Rs. 2000
Cyber Psychology ISBN: 978-81-8220-366-2	Ravindra Thakur	Rs. 2500
Criminal Computer Behaviour ISBN: 978-81-8220-363-1	Nina Verma	Rs 600
Organisational Behaviour: A Research and Theory Based Text Book ISBN: 978-81-8220-382-2	Dr. Sunil Kumar	Rs. 1900
Mental Disorders and Treatment ISBN: 978-81-8220-357-0	Katherine Marsland	Rs 750
Theory of Perception and Perceptual ISBN: 978-81-8220-359-4	Ruth Baer	Rs. 650

Psycho-Feminism (2 Vols. Set)	K.L. Kerber	Rs. 1900
ISBN: 978-81-8220-392-1		
Health and Well-being: Emerging Trends	Sandhya Ojha,	Rs. 2500
ISBN: 978-81-8220-284-9	U. Rani Sristava and S. Joshi	
Psychosocial Aspect of Health and Illness	Ed. by Dr. Sandhya Ojha	Rs. 2200
ISBN: 978-81-8220-315-0	and Dr. Shambhu Upadhyay	
Explorations in Human Spirituality	Akbar Husain	Rs. 900
ISBN: 978-81-8220-316-7		
Business Psychology	Ed. by NovRattan Sharma	Rs. 999
ISBN: 978-81-8220-311-2	Amrita Yadava	
Psychology and Health Promotion	Ed. by Radhey Shyam	Rs. 790
ISBN: 978-81-8220-299-3	and Dr. S.R. Khan	
Violence and Conflict Resolution:	Ed. by Neelam Rathee	Rs. 1200
Contemporary Perspectives		
ISBN: 978-81-8220-293-1		
Stress Management	Ruth Baer	Rs. 850
ISBN: 978-81-8220-331-0		
Organisation Behaviour	Edited by Shyodan Singh	Rs. 990
ISBN: 978-81-8220-263-4		
Socialisation of Psychopathological Disorder	Katherine Marsland	Rs. 3600
ISBN: 978-81-8220-247-4	and Ruth Baer	
Twenty-first Century Psychology:	Edited by Akbar Husain	Rs. 750
Spirituality, Behaviour and Wellness		
ISBN: 978-81-8220-264-1		
Perception of the Elderly	Swaha Bhattacharya &	Rs. 750
ISBN: 978-81-8220-203-3	Monimala Mukherjee	
Global Encyclopaedia of	Arti Sharma	Rs. 2000
Clinical Psychology		
ISBN: 978-81-8220-204-7		
Buddhist and Western Psychology:	V. Nithiyanandam	Rs. 540
Comparative Study		
ISBN: 978-81-8220-293-0		
Psychology of Education	Nov Rattan Sharma,	Rs. 840
ISBN: 978-81-8220-212-2	Ashok K. Kalia & Amrita Yadava	
Environmental Psychology	Swaha Bhattacharya	Rs. 850
ISBN: 978-81-8220-202-3		
Counselling: Theory, Research and Practice	Nov Rattan Sharma,	Rs. 850
ISBN: 978-81-8220-211-5	Ashok K. Kalia & Akbar Husain	
Psychoneuroimmunology:	Rajbir Singh, Radhey Shyam	Rs. 750
A Behavioural Approach	& Shyodan Singh	
ISBN: 81-8220-262-0		
Psychology of Sports Performance	Shyodan Singh	Rs. 960
ISBN: 81-8220-279-5		

COMPREHENSIVE CAPSULE OF PSYCHOLOGY

Author :	Masood-ul-Hassan, Tasdique Ahmad and Prof. Shamim A. Ansari
ISBN:	978-93-81695-28-9
Edition:	1st
Year:	2014
Pages:	484
Binding:	Paperback
Size:	8×6
Publisher Name:	Global Academic Publishers & Distributors
Price:	495.00

About the Book

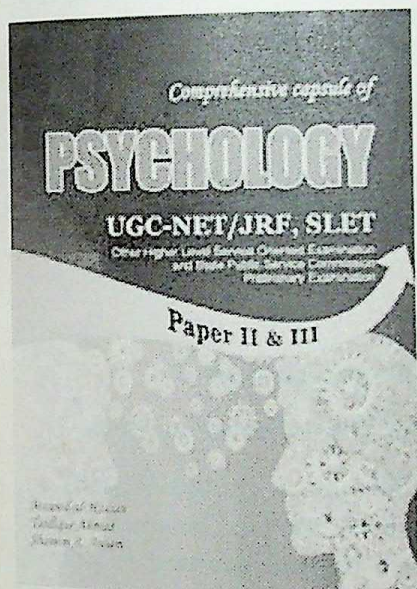
The present effort offers students a very clear and comprehensive understanding of psychology which has a very broad spectrum of the various phenomena and concepts. The students of psychology after going through this book namely, 'Comprehensive Capsule of Psychology' can very easily prepare themselves for the various competitive examinations conducted by Public Service Commissions, UGC/NET/JRF/SLET and other Public and Private Sector Examinations.

About the Authors

Masood-ul-Hassan, M.A., M.Phil (Psychology), P.G. Diploma in Guidance and Counselling, Presently pursuing Ph.D.

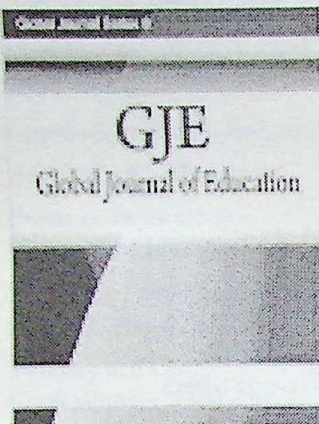
Tasdique Ahmad, M.A. (Psychology) MSW (Master of Social Work), P.G. Diploma in Guidance and Counselling, A.M.U., Aligarh

Prof. Shamim A. Ansari, Dept. of Psychology, Aligarh Muslim University



Event 2014-2015

Introduce New Journals



Global Journal of Education

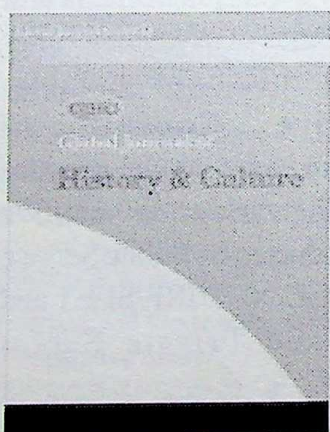
Half-yearly

*Edited by Dr. Noorjehan N. Ganihar
Dr. Shyodan Singh*

Published by Global Vision Publishing House

The Global Journal of Education (GRE) is a global academic biannual refereed (On-line and Print) journal, devoted to publish theoretical and empirical research papers, reports and short-communications in the field of Education. The main purpose to

out research papers from renowned doctors, scientists, scholar and researchers in the field of education. Global Journal of Education is a high quality journal which publishes original research on all areas of education and related disciplines that can be easily accessed by researchers and development leaders in world.



Global Journal of History & Culture

Half-yearly

Edited by Dr. Ichhimuddin Sarkar

Published by Global Vision Publishing House

Global Journal of History & Culture (GJHC) is a peer-reviewed Open Access (OA) biannual refereed (On-line and Print) Journal devoted to publish theoretical and empirical research papers, reports and short-communications in the field of Social, Cultural

Economic and Political History relating to ancient, medieval and modern Indian History & Historiography. It also publish research papers on History of Literature, Epigraphy, Archaeology, Art & Architecture, other aspects of Indian History and Archaeology. GJHC aims to publish original research articles, reports and reviews with an emphasis upon emerging and on-going debates relating to all areas of History and Social Sciences addressing complex socio-historical issues. Global Journal of History & Culture is committed to provide original and authentic sources of information through interdisciplinary synergy in an easily accessible medium worldwide. CC-0. In Public Domain. Gurukul Kangri Collection, Haridwar

Journal of Indian **Health Psychology**

Central Library
Banat Lal Kanya University
Barnala-220403 (India)

Journal of Indian Health Psychology (JIHP) is a biannual refereed Journal devoted to interdisciplinary research with the objective of furthering an understanding of the scientific relationship between behavioural principles on one hand and health psychology on the other. The Journal provides a forum to integrate the theoretical, empirical and application based knowledge in this area. The distinctive feature of the journal is to include a special section of the articles based on Indian perspectives of health psychology and behaviour. Dissemination of the knowledge among the professional and upcoming researchers will go a long way in benefitting the masses at large. Research carried out at individual, group and community level are welcome.

EDITORS

Prof. Rajbir Singh
Department of Psychology
M.D. University, Rohtak
Mob: 9416380748

Prof. NovRattan Sharma
Department of Psychology
M.D. University, Rohtak
Mob: 9355612805

MANAGING EDITOR

Dr. Deepti Hooda
Dept. of Psychology
M.D. University, Rohtak
Mob-9416740136

BOARD OF CONSULTING EDITORS

Prof. A.K. Srivastava
Deptt. of Psychology
Banaras Hindu University,
Varanasi-221005

Prof. Amrita Yadava
Deptt. of Psychology
M.D. University,
Rohtak-124001

Prof. Girishwar Misra
Deptt. of Psychology
University of Delhi,
Delhi-110007

Prof. G.P. Thakur
12, Qutabview Apartment
Shaheed Jeet Singh Marg,
Delhi-110007

Prof. Jayanti Basu
Deptt. of Applied Psychology
University of Calcutta,
Kolkata-700009

Prof. Manas K. Mandal
Defence Institute of
Psychological Research
Timarpur, Delhi-110054

Prof. Meena Hariharan
Centre for Health Psychology
Central University of Hyderabad
Hyderabad, (A.P.)-500046

Prof. Sagar Sharma
House No. 564,
Sector-36B
Chandigarh-160036

Prof. Shikha Dixit
Deptt. of Humanities and
Social Sciences
I.I.T. Kanpur (U.P.)-208016

Prof. Urmi Nanda Biswas
Deptt. of Psychology
The M.S. University, Baroda
Vadodara-390002

The views expressed in this journal are of the writers and may not necessarily reflect those of the editors and editorial board.

The territorial jurisdiction for all the disputes shall be N.C.T. of Delhi.

Journal of Indian
Health Psychology

VOL. 9, NO. 1, September, 2014

Editors

Prof. Rajbir Singh

Prof. NovRattan Sharma

Central Library
Gurukul Kangri University
Haridwar-249404 (U.A.)

Owned, Printed & Published by Dr. N.K. Singh, F-4, 'Hari Sadan', 20, Ansari Road, Daryaganj, New Delhi-110002

Printed at: R.K. Offset, Naveen Shahdara, Delhi-110032.

Journal of Indian Health Psychology is a biannual Journal devoted to interdisciplinary research publication with the objective of furthering our understanding of scientific relationships between behavioural principles on one hand and health issues on the other. This journal shall provide a forum to integrate the theoretical, empirical and application based knowledge in this area. The distinctive feature of the journal will be to include a special section of articles based on Indian perspectives of health psychology and behaviour. Dissemination of the knowledge among the professionals and upcoming researchers will go a long way in benefiting the masses at large. Research carried out at individual, group and community level are welcome.

To enter your subscription for outstanding biannual research journal

Journal of Indian Health Psychology

Please fill out and return the Order Form below (or a copy thereof)

SUBSCRIPTION ORDER FORM

Please enter my subscription to **Journal of Indian Health Psychology**

Volume.....

No.

Year.....

SUBSCRIPTION RATES

	Print Price			Online Price			Online + Print Price		
	Rs.	\$(US)	€	Rs.	\$(US)	€	Rs.	\$(US)	€
Annual	1500	200	150	2200	250	200	3000	400	200
Five Years	6500	800	450	9500	1000	500	15000	2000	1000
Life Members	50000	4000	3000	75000	5000	4000	125000	10000	8000

I enclosed a cheque/DD/MO of Rs./\$/€.....cheque/DD No.....

made payable to the **Global Vision Publishing House**.

(Please add Rs. 100 for outstation cheques)

Name/Inst:

Address:

Tel. No. email

Signature

NOTE:

1. Kindly issue Cheques/Draft/MO drawn in favour of **Global Vision Publishing House** and payable at Delhi.
2. All subscription will be processed only against advance payment.

GLOBAL VISION PUBLISHING HOUSE

F-4, 1st Floor, 'Hari Sadan', 20, Ansari Road, Daryaganj,
New Delhi-110002 (INDIA)

Tel.: Tel.: 23261581, 23276291, Mob: 9810644769

Email: editorial@globalvisionpub.com; info@globalvisionpub.com

Website: www.globalvisionpub.com

EDITORIAL

The *Journal of Indian Health Psychology* is devoted to interdisciplinary researches in the field of Health Psychology and provides a platform for communication among health professionals. The present issue of the journal includes eleven articles and a book review. All the articles empirical as well as theoretical are related to key issues of today's scenario. The journal aims at promoting and managing health by applying psychological principles.

In the article section, P.C. Mishra and Swati Pathak emphasize the importance of social support and social network in cervix cancer patients. The article also suggests that the psychosocial interventions should focus on creating supporting environment and supportive care. The next article of this section by Asher Andrew, Vincent Kallavarapu, Marlyn Thomas and Sunayana Swain express the need for understanding the communication, based on the bidirectional approach of communication, between doctor and patient in the present context of health care and management. This article also draws the attention to the fact that the need of the hour is acknowledging and training the health professionals in effective communication skills leading to improved health care system.

The findings of the first article in the research section by Divya Singh, Bipin Kumar, Anjana Mukhopadhyay and Anup Singh, conveys the message to encourage the HIV-infected individuals to rise above their feeling of self-hatred, which deters them from disclosing his or her HIV status and making them to suffer the consequence of denied support, emotionally, financially, physically and socially, that helps to lead a better life. The next two articles focus on wellbeing of youth, Suneesh M.S., Hridya V.M and Sukanya. B. Menon concluded that managing stress and enhancing self-regulatory behavior provide a better psychological wellbeing among youth. Rekha, Midha and Ritu Rani report that emotional adjustment and home adjustment are potent predictors of well-being of young adults.

B.S. Sandhu and Tarika Sandhu report that Rorschach protocols of creative individuals in both the fields viz sciences and literature reveal that at the same level of creativity individuals subjective experience of well being does contribute to the direction, quality and output of creatives in both fields.

Two articles in this section focus on Diabetes Type 2 patients. Kadamba Swati Singh and Deepti Hooda found that internal health locus of control significantly predicts adherence to medication. Musaddiq Jahan report that diabetic type 2 patients whose blood sugar level are under control, have higher internal health locus of control and are more compliant with medical regimen. Females with blood sugar level under control are more compliant to their medical regime than their male counterparts. No gender difference on health locus of control and compliance to medical regime in uncontrolled diabetes patient.

Renu and NovRattan Sharma aim to assess relationship between functioning of emotion and positive health. They observed a significant relation between the two variables. Naved Iqbal, Mehfooz Ahmad, Sheema Aleem and Divya Mudgal reveal that the experiences of paranormal phenomena have more manic, dissociative, schizotypal, anxiety, depression as compared to non experience group. The last article in this section by Mohammad Imran Khan and Abhay Kumar Srivastava deals with Re-validation of the recovery from illness scale.

Editors express their gratitude to all the investigators/authors of the articles, referees and book reviewer for their valuable inputs. Editors do not owe to the data and ideas incorporated in the articles to which the contributors are solely responsible. Commentaries and reactions may be addressed to them directly.

Editors

CONTENTS

<i>Editorial</i>	(iii)
1. Internalised Stigma and Quality of Life in People Living with HIV <i>Divya Singh, Bipin Kumar, Anjana Mukhopadhyay and Anup Singh</i>	1
2. Effect of Stress and Social Support in Cervix Cancer Patients <i>P.C. Mishra and Swati Pathak</i>	11
3. Doctor-Patient Communication in Health Care: Issues and Challenges <i>Asher Andrew, Vincent Kallavarapu, Marlyn Thomas and Sunayana Swain</i>	21
4. Functioning of Emotion and Positive Health: A Co-relational Study among Adults <i>Renu and NovRattan Sharma</i>	37
5. Impact of Self-Talk and Personality on Emotional Intelligence <i>Meenakshi Chauhan and P.K. Rai</i>	51
6. Health Locus of Control and Compliance with Medical Regimen: A study of Type 2 Diabetes Patients <i>Musaddiq Jahan</i>	65
7. Adjustment: An Indicator of Well-being among Young Adults <i>Rekha, Punam Midha and Ritu Rani</i>	71
8. Psychological Disorders: Comparison between Male and Female Experiencers and Non-Experiencers of Paranormal Phenomena <i>Naved Iqbal, Mehfooz Ahmad, Sheema Aleem and Divya Mudgil</i>	79

9. Re-Validation of the Recovery from Illness Scale
by Rasch and Confirmatory Factor Analysis
Mohammad Imran Khan and Abhay Kumar Srivastava
10. Stress, Self Regulation and Psychological Wellbeing
among Youth
Suneesh M.S., Hridya V.M. and Sukanya. B. Menon
11. A Study of Correlation Between Locus of Control and
Adherence to Medication in Diabetes Type 2 Patients
Kadambari, Swati Singh and Deepti Hooda
12. Rorschach Protocols of Subjective Experience of
Well Being in High Creatives
B.S. Sandhu, and Tarika Sandhu

Book Review

- ☞ Applied Spirituality
Sarvdeep Kohli

INTERNALISED STIGMA AND QUALITY OF LIFE IN PEOPLE LIVING WITH HIV

Divya Singh*, Bipin Kumar**,
Anjana Mukhopadhyay*** and Anup Singh****

ABSTRACT

HIV/AIDS is recognised as a highly stigmatized disease which negatively influences the well-being of people living with HIV/AIDS. In the present study, an attempt has been made to compare the quality of life across different high, moderate and low levels of internalized HIV- stigma. In this cross-sectional study, a total number of 100 HIV- infected individuals already enrolled in ART centre, Sir Sundar Lal Hospital, Banaras Hindu University, Varanasi, India, were taken as subjects. The Internalised Stigma Index and Hindi version of WHOQOL-BREF were used to assess the quality of life in high, moderate and low levels of internalized stigma among HIV infected individuals. One-way analysis of variance followed by post hoc tukey test was used to compare the effect of internalised stigma categories on each domain of quality of life. It was found that physical quality of life, psychological quality of life, and environmental factor differed significantly across various internalised stigma level. Whereas, social relationship domain of quality of life differ significantly only in low and high internalised stigma category and no significant difference was found between low and moderate internalised stigma category. The finding of the present study conveys an encouraging message to HIV-infected individuals to rise above their feeling of self-hatred and lead a better life.

Keywords Stigma, HIV, AIDS, Quality of life

* Research Scholar, Department of Psychology, B.H.U. Email: divya.singhbhu85@gmail.com

** Research Scientist 'B', Department of Psychology, B.H.U.

*** Professor, Department of Psychology, M.M.V., B.H.U.

**** Assistant Professor, Department of Medicine, I.M.S., B.H.U.

INTRODUCTION

Since the discovery of AIDS in 1981, it has been recognised as associated with fear, denial, discrimination and stigma (Parker & Aggle 2003). HIV/AIDS is perhaps the most stigmatized medical condition in the world (Crawford, 1996; Peters, den Boer, Kok, & Schaalma, 1994). HIV/AIDS-related stigma is prevalent in the lives of people living with HIV. It's almost a universal phenomenon, although they manifest differently and in varying degrees in different cultural setting.

Discussion of stigma, particularly in relation to HIV/AIDS often begins with Goffman's (1963) definition of an attribute that is "significantly discrediting". Herek et al. (1998) defines HIV stigma as a socially shared knowledge about the devalued status of people living with HIV. It is manifested in prejudice, discrimination, discrediting and discrimination directed at people perceived to have HIV/AIDS and the individuals, groups and communities with whom they are associated. Studies on HIV/AIDS stigma highlights different forms of stigma as experienced by people living with HIV/AIDS: Enacted stigma, Perceived stigma (Berger, Ferrans & Lashley, 2001; Scambler & Hopkins, 1986; Steward et al., 2008), Vicarious stigma (Steward et al., 2008) and Internalised stigma (Berger, Ferrans & Lashley, 2001; Lee, Kochman, & Sikkema, 2002; Steward et al., 2008).

Each of these forms of stigma are differently related to psychological, behavioural, and health outcomes (Earnshaw & Chaudoir, 2009). Among these kinds of stigma internalized stigma may have even more severe consequences than perceived or enacted stigma. Internalized stigma includes negative beliefs, views and feelings towards HIV/AIDS and oneself (Lee, Kochman, & Sikkema, 2002). In this case individual's self concept becomes congruent with the stigmatizing responses of others and they accept their discredited status as valid (Jones et al., 1984; Herek, 2008) results in feeling of self-hatred. Lee, Kochman and Sikkema (2002) found that internalized stigma is experienced by majority of people living with HIV/AIDS. Results of studies showed that internalized stigma is likely to make HIV-infected individuals more sensitive towards both actual and anticipated rejection and stigmatization by others, which deters them from disclosing their serostatus to others (Chesney & Smith, 1999), discourage people living with HIV/AIDS (PLWHA) from seeking care (Malcolm et al., 1998) and may increase the levels of their loneliness compared to the general population (Vance, 2006; Ware, Wyatt, & Tugenberg, 2006).

PLWHA who feel stigmatized also feel anxiety, depression, and alienation and these feelings of anxiety, depression, and alienation are associated with disruptions in normal social relationships (Crandall & Coleman, 1992). All these are likely to affect HIV-positives ability to effectively manage their disease.

With the introduction of antiretroviral therapy HIV infected men and women are living longer, hence enhancing quality of life (QOL) is an important area of

concern for both, health care provider and researchers. Quality of life is a term that is popularly used to convey an overall sense of well-being and includes aspects such as happiness and satisfaction with life as a whole. Quality of life is a multidimensional concept that refers to the individual's perception of their position in the context of culture and value system in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging complex context shaped by an individual's physical health, psychological health, social relationships and environmental factor (WHO, 1995). This definition reflects the view that quality of life refers to subjective evaluation, which is embedded in a cultural, social and environmental context.

A number of studies that centred on the quality of life of HIV-positive individuals using different types of QOL measuring tools have shown that socio-demographic characteristics, such as age (liu et al., 2006; Molassiotis, Callaghan, Twinn, & Lam, 2001), gender (Griffin, Rabkin, Remien & Williams, 1998; Mrus et al., 2005; Starace et al., 2002), marital status (Nojomi, Anbary, & Ranjbar, 2008), education (Murri et al., 2003; Wachtel et al., 1992), income (Wig et al., 2006), employment status (liu et al., 2006; Nojomi, Anbary, & Ranjbar, 2008) and disease related variables such as disease stage (Griffin, Rabkin, Remien & Williams, 1998; Lubeck & Fries, 1997), opportunistic infection (Basavaraj, Navya, & Rashmi, 2010), CD4 count (Nirmal, Divya, Dorairaj & Venkateswaran, 2008) as well as the use of highly active antiretroviral therapy (HAART) (Liu et al., 2006) and side effect of these treatments (Burgoyne & Tan, 2008), were reported to have a significant impact on the quality of life of PLWHA. But, there is a great variability in the reported findings regarding these relationships.

The increase in number of symptoms and degree of severity has been identified as an important predictor of well-being of people living with HIV/AIDS (Bing et al., 2000; Lubeck & Fries, 1993). Apart from physical deterioration, HIV/AIDS patients also struggle with numerous psychosocial problems such as stigma, poverty, depression, substance abuse, and culture beliefs which can affect their quality of life (Aranda- Naranjo, 2004). In India, six important themes that emerged in the three centres *i.e.*, Delhi, Banglore, & Chennai, as being important for quality of life were: Access to health care, stigma, sexuality issues, death, body image and spirituality (Chandra, Saxena & Kumar, 2000). Swindells et al. (1999) have found that health related quality of life in HIV-infected person is determined by satisfaction with social support, degree of hopelessness and coping style.

The literature has provided substantial evidence of the negative influence of internalized HIV/AIDS-related stigma in the lives of PLWHA. Despite the potential significance of internalized HIV stigma in the lives of PLWHA, this concept received less attention from both, researchers and programme planners (Brouard & Wills, 2006; Crandall & Coleman, 1992). A better understanding of the effects

of internalized stigma on PLWHA is required to reduce this and to minimize deleterious effects on the QOL of people living with HIV/AIDS. Thus, the present study aim to assess the quality of life across different level of internalized HIV- stigma (*i.e.*, High, Moderate and Low).

In lieu of this objective, it has been hypothesized that high internalized stigma category would score lower on all domains of quality of life than moderate and low internalized stigma category.

METHODOLOGY

Sample

This is a cross-sectional study. The study sample consisted of 100 HIV positive individuals enrolled at ART Centre, Sir Sundar Lal Hospital, Banar Hindu University, Varanasi. The inclusion criteria included (1) documented status of HIV positive (2) on Highly Active Antiretroviral Therapy (HAART) for at least six months (3) minimum of 18 years of age (4) ability of writing, reading and speaking Hindi (5) having no history of drug abuse and alcoholism (6) having no history of psychiatric problems such as mental retardation (7) having no history of cognitive problems (8) willingness to provide informed consent and willingness to spare the time for the interview.

Tools

Hindi version of WHOQOL-BREF (Saxena, Chandiramani & Bhargava, 1998). WHOQOL-BREF is a short version of the WHOQOL-100 and is a self-rating instrument. It includes 26 items in which 24 items cover the four main domains such as physical health (physical state), psychological health (cognitive and affective state), social function (interpersonal relationships and social role in life) and environmental factors (relationships to salient features of the environment) and remaining two items measure satisfaction of overall health and overall quality of life. The physical domain includes three facets *i.e.*, pain and discomfort, energy and fatigue, and sleep and rest. The psychological domain includes five facets *i.e.*, positive feelings, negative feelings, learning and concentration, body image, and self-esteem. The social domain includes three facets *i.e.*, personal relationship, practical social support, and sexual activity. The environmental domain includes five facets *i.e.*, financial resources, healthcare availability, opportunities for acquiring new information and skills, opportunities for leisure, and transport. Each item uses a Likert-type five-point scale in positive direction (higher the score, higher the quality of life). The WHOQOL-BREF score demonstrated good discriminated validity, content validity, and test-retest reliability, and the questionnaire is considered a valid and reliable measure for assessing QOL profile in different population, including patients sample (WHOQOL Group, 1998).

Internalised stigma index. Internalised stigma index is developed by Steward, Gregory, Ramakrishna, Bharat, Chandy, Wrubel and Ekstrand (2008). It is 10-item index that assess the extent to which, being an HIV-infected, they should be treated in a discriminatory manner or be a target of stigmatizing beliefs. Responses were given on a 4-point scale running from 0 (not at all) to 3 (a great deal). The scale was translated in Hindi to administer on the Hindi speaking local population. Subjects having same frame of mind and speaks Hindi language require the tool in Hindi, thus the tool was transformed in Hindi by the translation method available. The translation was done by the present researcher, a bilingual expert, and a subject expert. The items were then systematically scrutinized in terms of the contents yielding generalization of human behaviour.

Procedure

Initially a proper rapport was established with the selected subject. Personal information of the subject was filled. Voluntary participation certificate was signed by the subject. Internalised Stigma Index and Hindi version of WHOOQL BREF was administered one after other on the 100 HIV patients registered in the ART centre, Sir Sundar Lal Hospital, BHU. All HIV patients were on Highly Active Antiretroviral therapy at least for the last 6 months. Subjects were either in stage-I (*i.e.*, Asymptomatic) or stage-II (*i.e.*, Symptomatic), according to the WHO Disease Staging System for HIV Infection and Disease. All participants had completed primary education, which include reading, writing and speaking Hindi fluently. Subjects having a history of drug abuse, alcoholism, cognitive problems and psychiatric problems such as mental retardation were excluded.

Data Analysis

SPSS PC+ (Version 16.0) software was used for statistical analysis. The descriptive variables such as mean and standard deviations were used. A comparison between categories was calculated using one way ANOVA followed by post hoc Tukey test.

Ethical Approval

At the beginning of each interview, written informed consent was obtained from each participant. The ethical review committee of the Institute of Medical sciences, Banaras Hindu University, Varanasi, had approved the study.

RESULT AND DISCUSSION

In the present study, majority of the sample reported experiencing some level of internalized stigma related to their serostatus. Many subjects experienced high level of internalised HIV-stigma, but few also reported experiencing no internalised HIV-stigma at all. These results are similar to the findings of Crandall and Coleman (1992), Lee, Kochman, and Skikema (2002) and Steward et al (2008) that HIV-positives personally hold mixed views about the validity of the

Intern
In
HIV is
intern
Furthe
which
Thus,
indivi
disclo
denied
a bette
need
height
its ne
alterin

Arand
Basav
Berg
Bing
Burg
Brow
Chan
Che
Cra
Cra
Dav
Ear

10

10



In conclusion, even with its limitation this study has shown that although HIV is highly stigmatized disease, there are individual differences in the level of internalized stigma that HIV-positive people experience related to their illness. Further, internalizing of stigmatized feeling accentuates the problem of stigma which negatively influences the quality of life in HIV-infected men and women. Thus, finding of present study convey an encouraging message to HIV-infected individuals to rise above their feeling of self-hatred which deters them from disclosing his or her HIV status and making them to suffer the consequence of denied support, emotionally, financially, physically and socially that helps to lead a better life. It also cautions researcher and programme planner, highlighting the need for more work in order to determine the factors that either mitigate or heighten the internalised stigma experience by people living with HIV as well as its negative effects. The findings also support the need to focus interventions on altering self stigmatizing attitudes and enhancing coping skills.

REFERENCES

- Aranda-Naranjo, B. (2004). Quality of life in the HIV-positive patients: Implication and consequences. *Journal of the Association of Nurses AIDS Care*, 15, 20s-27s.
- Basavaraj, K. H., Navya, M.A., & Rashmi, R. (2010). Quality of life in HIV/AIDS. *Indian Journal of Sexually Transmitted Disease*, 31, 75- 80.
- Berger, B. E., Ferrans, C. E., & Lashley, F. R. (2001). Measuring stigma in people living with HIV: Psychometric assessment of the HIV stigma scale. *Research in Nursing and Health*, 24, 518-529.
- Bing, E. G., Hays, R. D., Jacobson, L. P., Chen, B., Gange, S. J., & Kass, N. E. (2000). Health-related quality of life among people with HIV disease: Results from the multicenter AIDS cohort study. *Quality of Life Research*, 9, 55-63.
- Burgoyne, R. W., & Tan, D. H. (2008). Prolongation and quality of life for HIV-infected adults treated with highly active antiretroviral therapy (HAART): A balancing act. *Journal of Antimicrobial Chemotherapy*, 61, 469-473.
- Brouard, P., & Wills, C. (2006). *A closer look: the internalisation of stigma related to HIV*. Washington, DC: United States Agency for International Development.
- Chandra, P. S., Saxena, S., & Kumar, S. (2000). What is important for quality of life among HIV infected person in India? - A qualitative study. *Quality of Life Research*, 9, 330.
- Chesney, M. A., & Smith, A. W. (1999). Critical delays in HIV testing and care: The potential role of stigma. *American Behavioral Scientist*, 42, 1162-1174.
- Crandall, C. S., & Coleman, R. (1992). AIDS related stigmatization and the disruption of social relationships. *Journal of Social and Personal Relationship*, 9, 163-177.
- Crawford, A. M. (1996). Stigma associated with AIDS: A meta-analysis. *Journal of Applied Social Psychology*, 26, 398-416.
- Davison, K. P., Pennebaker, J.W., & Dickerson, S. S. (2000). Who talks? The social psychology of illness support groups. *American Psychologist*, 55, 205-217.
- Earnshaw, V. A., & Chaudoir, S. R. (2009). From conceptualizing to measuring HIV Stigma: A review of HIV stigma mechanism measures. *AIDS Behaviour*, 13, 1160-1177.

- Goffman, E. (1963). *Stigma: Notes on the management spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.
- Griffin, K. W., Rabkin, J. G., Remien, R. H., & Williams, J. B. W. (1998). Disease severity, physical limitations and depression in HIV-infected men. *Journal of Psychosomatic Research*, 44, 219-227.
- Hays, R. B., Mumusick, L., Pollack, L., Hillard, R., Hoff, C., & Coates, T.J. (1993). Disclosing seropositivity to significant others. *AIDS Care*, 7, 425-431.
- Herek, G. M. (2008). *Understanding sexual stigma and sexual prejudice in the United States: A conceptual framework*. In D. Hope (Ed.), *Contemporary perspectives on lesbian, gay, & bisexual identities: The 54th Nebraska Symposium on Motivation*. New York: Springer.
- Herek, G. M., Mitnick, L., Burris, S., Chesney, M., Devine, P., Fullilove, M., Fullilove, R., Gunther, H. C., Levi, J., Michaels, S., Novick, A., Pryor, J., Snyder, M., & Sweeney, T. (1998). Workshop report: AIDS and stigma: A conceptual framework and research agenda. *AIDS & Public Policy Journal*, 13, 36-47.
- Jones, E. E., Farina, A., Hastorf, A. H., Markus, H., Miller, D. T., & Scott, R. A. (1984). *Social stigma: The psychology of marked relationships*. New York: W.H. Freeman.
- Lee, R. S., Kochman, A., & Sikkema, K. J. (2002). Internalized stigma among people living with HIV/AIDS. *AIDS and Behavior*, 6, 309-319.
- Liu, C., Johnson, L., Ostrow, D., Silvestre, A., Visscher, B., & Jacobson, L.P. (2006). Predictors for lower quality of life in the HAART era among HIV-infected men. *Journal of Acquired Immune Deficiency Syndromes*, 42, 470-477.
- Liu, C., Ostrow, D., Detels, R., Hu, Z., Johnson, L., Kingsley, L., & Jacobson, L. P. (2006). Impacts of HIV infection and HAART use on quality of life. *Quality of Life Research*, 15, 941-949.
- Lubeck, D. P., & Fries, J. F. (1993). Health status among persons infected with human immunodeficiency virus: A community based study. *Medical Care*, 31, 269-276.
- Lubeck, D. P., & Fries, J. F. (1997). Assessment of quality of life in early stage HIV-infected persons: Data from the AIDS time-oriented health outcome study (ATHOS). *Quality of Life Research*, 6, 494-506.
- Malcolm, A., Aggleton, P., Bronfman, M., Galvao, J., Mane, P., & Verrall, J. (1998). HIV-related stigmatization and discrimination: Its forms and contexts. *Critical Public Health*, 8, 347-370.
- Molassiotis, A., Callaghan, P., Twinn, S. F., & Lam, S. W. (2001). Correlates of quality of life in symptomatic HIV patients living in Hong Kong. *AIDS Care*, 13, 319-334.
- Mrus, J. M., Williams, P. L., Tsevat, J., Cohn, S. E., & Wu, A. W. (2005). Gender differences in health-related quality of life in patients with HIV/AIDS. *Quality of Life Research*, 14, 479-491.
- Murri, R., Fantoni, M., Del, B.C., Visona, R., Barracco, A., Zambelli, A., Testa, L., Orchi, N., Tozzi, V., Bosco, O., & Wu, A. (2003). Determinants of health-related quality of life in HIV-infected patients. *AIDS Care*, 15, 581-590.
- Nirmal, B., Divya, K. R., Dorairaj, V. S., & Venkateswaran, K. (2008). Quality of life in HIV/AIDS patients: A cross-sectional study in South India. *Indian Journal of Sexually Transmitted Diseases*, 29, 15-17.
- Nojomi, M., Anbary, K., & Ranjbar, M. (2008). Health related quality of life in patients with HIV/AIDS. *Archives of Iranian Medicine*, 11, 608-612.

- Parker, R., & Aggleton, P. (2003). HIV and AIDS-related stigma and discrimination: A conceptual framework and implication for action. *Social Science and Medicine*, 57, 13-24.
- Peters, L., den Boer, D. J., Kok, G., & Schaalma, H. P. (1994). Public reactions towards people with AIDS: An attributional analysis. *Patient Education and Counseling*, 24, 323-335.
- Saxena, S., Chandiramani, K., & Bhargava, R. (1998). WHOQOL-Hindi: A questionnaire for assessing quality of life in health care setting in India. *National Medical Journal of India*, 11, 160-165.
- Scambler, G., & Hopkins, A. (1986). Being epileptic, coming to terms with stigma. *Sociology of Health and Illness*, 8, 26-43.
- Starace, F., Cafaro, L., Abrescia, N., Chirianni, A., Izzo, C., Rucci, P., & De Girolamo, G. (2002). Quality of life assessment in HIV-positive persons: Application and validation of the WHOQOL-HIV, Italian version. *AIDS Care*, 14, 405-415.
- Steward, W. T., Gregory, M. K., Ramakrishna, J., Bharat, S., Chandy, S., Wrubel, J. & Ekstrand, M. L. (2008). HIV-related stigma: Adapting a theoretical frame work for use India. *Social Science & Medicine*, 67, 1225-1235.
- Swindells, S., Mohr, J., Justice, J. C., Berman, S., Squier, C., Wagener, M. M., & Singh, N. (1999). Quality of life in patients with Human Immunodeficiency Virus Infection: Impact of social support, coping style and hopelessness. *International Journal of STD and AIDS*, 10, 383-391.
- Vance, D. E. (2006). Self-rated emotional health in adults with and without HIV. *Psychological Response*, 98, 106-108.
- Wachtel, T., Piette, J., Mor, V., Stein, M., Fleishman, J., & Carpenter, C. (1992). Quality of life in persons with human immunodeficiency virus infection: Measurement by the medical outcomes study instrument. *Annals of Internal Medicine*, 116, 129-137.
- Ware, N. C., Wyatt, M. A., & Tugenberg, T. (2006). Social relationships, stigma and adherence to antiretroviral therapy for HIV/AIDS. *AIDS Care*, 18, 904-910.
- WHOQOL Group. (1998). Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychological Medicine*, 28, 551-558.
- Wig, N., Lekshmi, R., Pal, H., Ahuja, V., Mittal, C. M., & Agarwal, S. (2006). The impact of HIV/AIDS on the quality of life: A cross sectional study in north India. *Indian Journal of medical Science*, 60, 3-12.
- World Health Organization (1995) Quality of Life Assessment (WHO/QOL): Position paper from the World Health Organization. *Social Science and Medicine*, 10, 1403-1409

Key

in de
cour
stan
cour
cerv
the
(Sar

*

**

EFFECT OF STRESS AND SOCIAL SUPPORT IN CERVIX CANCER PATIENTS

P.C. Mishra and Swati Pathak***

ABSTRACT

Cancer of the cervix is a significant public health problem globally, especially in developing countries where it is the most common cancer in women. The psychological impact of cervical cancer is also significant. Each patient experience a range of practical, psychological and emotional challenges as a result of their diagnosis and treatment related adverse effects. In early stages it may be treatment that causes most stress, rather than the effects of the disease itself. This may impair the individual's coping abilities. Women with cervix cancer pass through a period with significant life changes that require immense psychological and social support. The present theoretical paper is an attempt to understand the effects of stress and social support in cervix cancer patients.

Keywords: Cervix Cancer, Stress, Social Support.

INTRODUCTION

Cancer of the cervix is a significant public health problem globally, especially in developing countries where it is the most common cancer in women. Developing countries bear a disproportionate burden of the disease, experiencing age standardised mortality rate that are twice those experienced in developing countries. Every year, approximately, half a million new cases of cancer of the cervix are reported globally, 80% of which occur in developing countries, where the disease is also the leading cause of cancer related death among women (Sankaranarayanan, Budukh & Rajkumar, 2001). According to IARC estimates,

* Prof & Head, Department of Psychology, Lucknow University, Lucknow, Email: drpcmishra@gmail.com

** ICMR-JRF, Department of Psychology, Lucknow University, Lucknow, Email: pathakswati78@yahoo.co.in

mortality from cervical cancer is expected to witness a 79% increase from 74,118 deaths in 2002 to 132,745 deaths by 2025 (National Cancer Register Programme, 2009, WHO 2004).

Cervical cancer is caused by the sexually transmitted HPV, which is the most common viral infection of the reproductive tract. Almost all sexually active individuals will be infected with HPV at some point in their lives and some may be repeatedly infected. Although, there is no clear relationship between HPV and mental problems, there may be associated psychological problems such as feelings of fear, guilt, shame and anxiety. Also intrusive thoughts have been described in relation to the human immunodeficiency virus (HIV), depression, symptoms and lowered quality of life in the psychosexual fields and in sleep quality (Rose, Peake, Ennis, Pereira & Antoni; 2005).

The psychological impact of cervical cancer is also significant. Each patient experience a range of practical, psychological and emotional challenges as a result of their diagnosis and treatment related adverse effects. Each patient's life may be further disrupted by changes in role and family functioning, occupational or employment status, and financial status. Shock, fear, self-blame, powerlessness and anger are the most common emotions experienced by women diagnosed with cervical cancer (Perrin, Daley, Naom, et.al., 2006).

A role for psychology in cancer was first suggested by Galen in AD 200-300, who argued for an association between melancholia and cancer, and also by Gedman in 1701, who suggested that cancer might be related to life disasters. 85% of cancers are thought to be potentially avoidable. Psychology therefore plays a role in terms, attitudes and beliefs about cancer and predicting behaviour such as smoking, diet and screening which are implicated in its initiation. In addition, suffers of cancer report psychological consequences, which have implications for their quality of life. Some evidence suggests that how well patients adapt to having cancer can affect the progression of the disease. Those who have high levels of hopelessness, depression and other psychological vulnerabilities have been found to survive for shorter periods after diagnosis than others do (Brown et al., 2003; Chida et al., 2008; Watson et al., 1999) perhaps because of the effects of stress and negative emotions on immunity and other processes (Antoni et al., 2006).

The persistent activation of the hypothalamic-pituitary-adrenal (HPA) axis in the chronic stress response and in depression probably impairs the immune response and contributes to the development and progression of some types of cancer.

In the early stages it may be treatment that causes most stress, rather than the effects of the disease itself. However, once treatment decisions and choices have been made, stress may still be important. The general process of hospitalization and surgery is known to be stressful and this may affect adversely

the quality of the experience for some (Mathews and Rietgeway, 1981; Mumford, Schlesinger and Glass, 1982). However, over and above this, some treatments for cancer have their own problems. Surgery is often tolerated as a necessary evil because it is seen as a treatment that will root cancer out, but subsequent chemotherapy and radiotherapy can be more difficult to deal with. Agitations, withdrawal, non-engagement with treatment and unrealistic expectations of treatment have been cited as predictors of poor outcome in radiotherapy (Schmat et al. 1982).

In a recent study Montgomery et al., (1999) reported that 30% of patients receiving radiotherapy suffered from adjustment disorder and/or stress/anxiety/depression. Chemotherapy is also associated with high levels of anxiety and depression (Middelboe et al., 1995). Chemotherapy is often accompanied by side-effects which may include nausea and vomiting. There is some evidence to suggest that these may be influenced by psychosocial factors. Some people develop the symptoms prior to the actual treatment (anticipatory nausea and vomiting-ANV) and for some, the unpleasant side-effects are exacerbated by anxiety (Andrykewski and Redd, 1987; Burish and Carey, 1986). Psychologically oriented stress management techniques have been shown to be effective in reducing both ANV and the frequency and intensity of nausea and vomiting during the chemotherapy itself (Burish, Carey, Krozely and Greco, 1987; Lyles, Burish, Krozely and Oldham, 1982; Morrow and Morrell, 1982).

It has also been argued that stressful life events may impair the individual's coping ability (Newell, 1999). Further analysis showed that criticism and overprotection by spouse leads to negative mood and stress (Cooley, 1999; Thotis, 1999). Hence, family and social support are necessary for the individual to acquire personal resources, the motivation to enhance, and promote development of the individual. Social support is the number of social contacts maintained by a person, or the cohesiveness of a social network (Kaplan et al., 1993). Cobb also defines social support as the perceived belonging to a social network of communication, mutual obligation where one can rely on others, and to be cared for and loved (in Day, 1999). Hence social support is present to the extent that people perceive themselves as belonging to a particular network.

Often patients face either isolation, or undesired increase in social contact at their homes. The support can be much or too little, and therefore fail to meet the patient's needs. Patients may experience too little or incorrect support because the family tends to misconceive their needs and priorities. (Tempelaar, De Haes, De Brutter, Bakker, Heuvel & van Niewenhuijsen, 1989) crowding causes tension and prevents people from experiencing needed states of privacy whereas, social isolation equally produces tension, and it is psychologically threatening (Proshansky, Nelson-Shulman & Kaminoff, 1979). Kaplan et al., (1993) suggested that chronic illness such as cancer can cause modifications in the support

environment, or family interactions. Moreover, the patient becomes a victim and the family may not know how to behave in the presence of patient, spouses may be overly concerned, or the family may shy away from emotional involvement with someone who may not be likely to survive. (Tempelaar et al., 1989).

Summers (1998) indicated that women with positive pap smears said their partners were very upset, and this perpetuated the guilt and distress that they already had. Bergmark and others (1999) also observed that women who had cervical cancer were often single, suggesting that some relationships end as a consequence of the illness. According to Corney et al., (1992) the sexual problems in patients' marriages resulted in marked difficulties.

According to Day (1999), families with a chronically ill patient are structurally like psychosomatic families. These families, according to Meissner (in Day, 1999), tend to be rigid and repressive. The family gets to be characterised by weak ego boundaries between members, over-protectiveness, rigidity of roles and rules, as well as lack of conflict resolution. Hudgens (in Day, 1999) also observed that the patient with chronic pain becomes dependent on the spouse or significant other. Communication between the family members also becomes indirect, social contacts are narrowed, and family members show an inability to handle anger effectively.

For married persons, it is highly likely that the spouse will be the primary source of both physical and emotional support in long-term illness. Social support is a critical resource for persons who face serious illness. Longitudinal studies of cancer patients show that social support at the time of diagnosis predicts not only better emotional outcomes but longer survival times as well (Funch & Marshall, 1983; Vachon, 1979; Weisman & Worden, 1980). A number of studies have documented that women show better emotional adjustment after diagnosis of breast cancer if their husbands are highly supportive (Jamison, Burnish, & Walston, 1987; Lichtman, Taylor, & Wood, 1984; Weisman, 1977). Among chronic pain patients, pain is less likely to lead to depression if the patient's spouse provides support (Kerns & Turk, 1984). For rheumatoid arthritis patients, support from the spouse is associated with better adjustment and the use of adaptive coping strategies (Manne & Zautra, 1989). It is important to discover the conditions that promote and interfere with the maintenance of a supportive marital relationship throughout the course of chronic illness.

The well spouse is not always a source of comfort. Marital partners of seriously ill patients can at times contribute to the patient's distress, exacerbate problems, or reduce the patient's motivation to recover or regain important functions. Spouses are sometimes quite critical of their ill partners. As a result the ill partners engage in less adaptive coping behaviours and are less well-adjusted emotionally than those whose spouses rarely engage in criticism (Pape, Taylor & Dougherty, 1999).

Illness such as cancer generates feelings of fear and aversion, especially in those who have no previous experience with or exposure to serious illness. At

the same time, many people believe that the most appropriate behaviour toward a cancer patient is to maintain a cheerful optimistic façade. The conflict between these two reactions may lead to ambivalence and anxiety over interacting with the patient. Contradictory verbal and non-verbal behaviour may be confusing or hurtful to the patient, who correctly detects a lack of genuineness (Wortman & Dunkel-Schetter, 1979).

At worst, fear or discomfort may cause people to avoid the patient altogether. Another source of "misfired" support may be differences in how the patient and the spouse think about the patient's disease. The patient's preoccupation with her illness may be deeply unsettling to the spouse because it threatens his more benign assessment of the threat posed by her disease (Lichtman et al., 1986). For an effective working relationship, both partners need to understand the other's way of thinking about the disease and the emotional ramification of the partner's viewpoint. Without this understanding, a continuing spiral of well-intentioned but unappreciated attempts at support and mutually increasing feelings of resentment and emotional isolation can easily result.

The spouse is frequently the first person from whom support is sought during crisis and evidence suggests that support from other sources cannot compensate for lack of intimate or marital support (Brown & Harris, 1978; Coyne & DeLongis, 1986; Lieberman, 1982; O, Hara, 1986).

Much of the research with women suffering from life threatening chronic illness like cervix cancer shows that they pass through a period of significant life changes that require immense psychological and social support. Lack of support during this phase interferes with their psychological and physical functioning. A beneficial role of social support in psychological and physical wellbeing of patients of heart surgery (Oxman & Hull, 1997), cancer (Ell, Nishimoto, Mediansky, Mantell & Hamovitch, 1992) and dialyses (Elal & Krespi, 1999) indicates a strong association between social support and improved psychological adjustments

Charmas (in Day, 1999) argues that despite disruptions and alterations caused by setbacks, complications, disability and impaired functioning, people with chronic conditions also struggle to have valued lives. Loss of status resulting from job loss, diminished income and loss of social support can have a profound effect on the patient's identity, as she is challenged to adapt to these losses. In adjusting her identity, she tries to come to terms with the constraints and limitations of the illness.

Greimel & Freidl (2000) indicated that patients undergoing radiotherapy report a high level of anxiety, emotional distress and treatment side-effects, as well as sexual dysfunction. The comparative studies showed that this emotional distress is higher in cervical cancer patients than in patients facing other threatening disease such as heart disease (Greimel & Freidl, 2000). Again, cervical and

ovarian cancer patients became more distressed after surgery than endometrial cancer patients.

Cervical cancer has proven to be one of the illnesses that affect the sufferer most severely and negatively. However, some patients can cope effectively with resilience while others may be devastated and worn out by the illness. Stavkary (in Rosch 1984) observed that the cancer patients with a favourable outlook on life are those that are able to express strong emotions under severe stress without loss of emotional control.

It has been observed that social support mitigates the effects of stressful life events (Kaplan, Sallis & Patterson, 1993). Social relationships influence behaviours, and in turn promote desirable health outcomes. It is argued that individuals who experience significant life stress and yet have strong social support will be protected from developing psychosomatic illness associated with stress (Kaplan et al., 1993). Deprivation of social resources on the other hand results in continuing, distressful, self-rejecting feelings. Supportive social networks may thus be expected to moderate the severity of the distress associated with stressful life events like cancer through the promotion of emotional and physical support (Day, 1999). A study done by Bloom (in Day, 1999) on breast cancer indicates that social support was found to be the strongest predictor of healthy adjustment. It had an effect on coping, sense of power and diminished psychological distress, which in turn resulted in positive self-concept.

Self-esteem is another factor that contributes to stress in cervix cancer patients. Self-esteem is the desire to be worthy, to love, and to be appreciated, strong, secure and loved (Samuels, 1977). The self-esteem theory asserts that individuals have a need to increase and maintain their feelings of worth, effectiveness and self-satisfaction. According to Samuels (1977), these feelings may be manifested either in a particular aspect of self-evaluation, or in global feelings. For instance, it may mean evaluating the self in terms of vaginal abnormalities or evaluating the self in terms of the overall abilities and strengths that one has. Looking at the physical abnormalities and behavioural deficits faced by cervical cancer patients, it is evident that they may have a very low self-esteem as their parts of self show discrepancy or incongruity.

The problem can however be avoided by giving what Rogers calls unconditional positive regard, which is a need every human has. Maddy (1996) argues that when a person receives unconditional positive regard from important others, she in turn regards herself positively and once this positive self-regard is established it becomes autonomous and self-perpetuating. The person then becomes in a way her own significant social other (Feist & Feist, 1998). Positive self-regard includes feelings of self-confidence and self-worth, which results from social approval. Gender studies have indicated that women tend to be more sensitive to other people's approval. Andersen and Cyranowsky (1994)

argue that gender differences in self esteem suggest that women are more dependent on others for self worth than men are.

Cervical cancer patients need a supportive environment that shows acceptance. They need to feel important, regardless of their illness. They also need people who respect their sexuality and individuality. In most cases, instead of getting support from their loved ones, they suffer rejection by intimate partners. Consequently, they are faced with feelings of worthlessness. The end result is incongruence that manifests itself in anxiety and threat. Thotis (in Day, 1999) suggests that the social environment provides identity and sources of positive self-evaluation, thereby improving self-esteem. Thus according to Cooley (in Day, 1999) social support should be given in the form of positive regard from significant others, as the approval and disapproval from others becomes incorporated into one's own esteem for self and an affection giving network is a positive basis for self evaluation and self acceptance.

Most researches on benefits of social support has focused on advantages acquired by individuals who receive support from others – better mental health, fewer physical health problems, even lower rates of mortality.

Looking at all these challenges facing the patients and their respective families, it is evident that there is a need for supportive care and psychosocial intervention.

REFERENCES

- Andersen, B.L. & Cyranowsky, J.M. (1994). Women's sexual self-schema. *Journal of Personality and Social Psychology*, 67(6), 1079-1100.
- Andrykowski, M.A.. & Redd, W.H. (1987) Longitudinal analysis of the development of anticipatory nausea. *Journal of Consulting and Clinical Psychology*, 55, 36-41.
- Antoni, M.H., Lutgendorf, S.K., Cole SW, et.al. (2006). The influence of bio-behavioural factors on tumour biology: pathways and mechanisms. *Nat Rev Cancer*, 6: 240-8
- Bergmark, K., Avall- Lundquist, E., Dickman, P.W., Henningsohn, L. & Steineck, G. (1999). Vaginal changes and sexuality in women with a history of cervical cancer. *The New England Journal of Medicine*, 340(18), 1383-1389.
- Brown, K.W., Levy, A.R., Rosberger, Z. & Edgar, L. (2003). Psychological distress and cancer survival: a follow-up 10 years after diagnosis. *Psychosomatic Medicine*. 65: 636-643.
- Burish, T.G. and Carey, M.P. (1986) Conditioned aversive responses in cancer chemotherapy patients: theoretical and developmental analysis. *Journal of Consulting and Clinical Psychology*, 54, 593-600.
- Burish, T.G., Carey, M.P., Krozely, M.G. and Greco, F.F. (1987) Conditioned side-effects induced by cancer chemotherapy: prevention through behavioural treatment. *Journal of Consulting and Clinical Psychology*, 55, 42-8.
- Chida, Y., Hamer, M., Wardle, J. & Steptoe, A. (2008). Do stress-related psychosocial factors contribute to cancer incidence and survival? *Nature Clinical Practice Oncology*. 5: 468-475.

- Corney, R., Everett, H., Howells, A. & Crowther, M. (1992). The care of patients undergoing surgery for gynaecological cancer: The need for information, emotional support and counselling. *Journal of Advanced Nursing*, 17, 667-671.
- Day, I.C. (1999). Self Concept and relational concomitants of irritable bowel syndrome. *Journal of Community and Applied Social Psychology*, 9, 23-33.
- Elal, G., & Krespi, M. (1999). Life events, social support and depression in hemodialysis patients. *Journal of Community and Applied Social Psychology*, 9, 23-33.
- Ell, K., Nishimoto, R., Mediansky, L., Mantell, J. & Hamovitch, M. (1992). Social relations, social support and survival among patients with cancer. *Journal of Psychosomatic Research*, 36, 531-541.
- Feist, J. & Feist, G.J. (1998). *Theories of Personality* (4th ed.). New York: McGraw Hill.
- Greimel, E.R., & Freidl, W. (2000). Functioning in daily living and psychological well-being of female patients. *Journal of Psychosomatic Obstetrics and Gynecology*, 21, 25-30.
- Greimel, E.R., Bjelic-Radisic, V., Pfisterer, J., Hilpert, F., Daghofer, F., Pujade-Laurade, E. et al. (2010) Toxicity and quality of life outcomes in ovarian cancer patients participating in randomized controlled trials. *Support Care Cancer* [ePub ahead of print].
- Jamison, R.N., Burnish, T.G., and Wallston, K.A. (1987) Psychogenic factors predicting survival of breast cancer patients. *Journal of Clinical Oncology*, 5, 768-772.
- Kaplan, R.M., Sallis, J.F. & Patterson, T.L. (1993). *Health and Human Behavior*. Singapore: McGraw-Hill.
- Lichtman, R.R. and Taylor, S.E. (1986). Close relationships and the female cancer patient. In Andersen, B.L. (ed.) *Women with cancer*. New York: Springer, 233-256.
- Lyles, J.N., Burish, T.G., Krozely, M.G. and Oldham, R.K. (1982) Efficacy of relaxation training and guided imagery in reducing aversiveness of cancer chemotherapy. *Journal of Consulting and Clinical Psychology*, 50, 509-24.
- Manne, S.L. & Zautra, A.J. (1990). Couples coping with chronic illness: women with rheumatoid arthritis and their healthy husbands. *Journal of Behavioural Medicine*, 13, 327-42.
- Manne, S.L., Pape, S.J., Taylor K.L., Dougherty, J. (1999). Spouse support, coping and mood among individuals with cancer. *Ann.Behav.Med.*; 21:111-21.
- Mathews, A. & Ridgeway, V. (1981) Personality and recovery: a review. *British Journal of Clinical Psychology*, 20, 243-60.
- Middleboe, T., Ovesen, L., & Mortensen, et.al. (1995). The relationship between self-reported general health and observed depression and anxiety in cancer patients during chemotherapy. *Nordic Journal of Psychiatry*, 40, 25-31.
- Montgomery, C., Lydon, A., and Lloyd, K. (1999). Psychological distress among cancer patients and informed consent. *Journal of Psychosomatic Research*, 40, 241-245.
- Morrow, G.R. and Morrell, C. (1982) Behavioural treatment for the anticipatory nausea and vomiting induced by cancer chemotherapy. *New England Journal of Medicine*, 307, 1476-80.
- Mumford, E., Schlesinger, H.J. and Glass, G.V. (1982) The effects of psychological intervention on recovery from surgery and heart attacks: an analysis of the literature. *American Journal of Public Health*, 72, 141-51.

- National Cancer Registry Programme and World Health Organisation. Development of an atlas of cancer in India, "First All India Report: 2001-2002, Mapping Patterns of Cancer in India". Available at <https://canceratlasindia.org/map.htm>, last accessed November 18, 2009
- National Cancer Registry Programme, http://www.icmr.nic.in/ncrp/cancer_reg.htm, last accessed December 27, 2009
- Newell, R.J. (1999). Altered body image: A fear-avoidance model of psycho-social difficulties following disfigurement. *Journal of Advanced Nursing*. 30(5), 1230-1239.
- Perrin, K.K., Daley, E.M., Naom, S.F., et.al. (2006). Women's reaction to HPV diagnosis: insights from in depth interviews. *Women Health*; 43(2): 93-110
- Proshansky, H.M., Nelson-Shulman, Y. & Kaminoff, R.D. (1979). The role of physical settings in life-crisis experiences. In I.G. Sarason & C.D. Spielberger (Eds.), *Stress and Anxiety*. New York and London: John Wiley & Sons.
- Rosch, P.J. (1984). Stress and cancer. In C.L. Cooper (Ed.), *Psychosocial Stress and Cancer*. New York: John Wiley & Sons.
- Rose, R.C., Peake, M.R., Ennis, N., Pereira, D.B. & Antoni, M.H. (2005). Depressive symptoms, intrusive thoughts, sleep quality and sexual quality of life in women co-infected with human immunodeficiency virus and human papillomavirus. *Chronic Illn*, 1: 281-7.
- Samuels, C.S. (1977). *Enhancing Self Concept in Early Childhood: Theory and Practice*. New York and London: Human Science Press.
- Sankaranarayanan, R., Budhuk, A.M. & Rajkumar, R. (2001). Rffective Screening Programmes for Cancer of the Cervix in low and middle income developing countries. *Bulletin of the World Health Organization*. 79(10).
- Schmale, A.H., Morrow, G.R., Davis, A. et.al. (1982). Pretreatment behaviour profiles associated with subsequent psychological adjustment in radiation therapy patients: a prospective study. *International Journal of Psychiatry in Medicine*. 12, 187-195.
- Summers, A. (1998). Mental health consequences of cervical cancer screening. *Psychology, Health & Medicine*, 3(1), 113-126.
- Taylor, S.E., Lichtman, R.R. and Wood, J.V. (1984) Attributions, beliefs about control and adjustment to breast cancer. *Journal of Personality and Social Psychology*, 46, 489-502.
- Tempelaar, R., De Hass, J.C., De Ruiter, J.H., Bakker, D., Heuvel, W.J. & Van Neivwenhuijsen, M.G. (1989). The social experiences of cancer patients under treatment: a comparative study. *Social Science Medicine*, 29(5), 635-642.
- Watson M., Haviland, J.S., Greer, S., Davidson, J., & Bliss, J.M. (1999). Influence of Psychological response on survival in breast cancer: a population based cohort study. *Lancet*; 354: 1331-6.
- Weisman, A.D. and Worden, J.W. (1977). *Coping and Vulnerability in Cancer Patients*. Boston: Massachusetts General Hospital.
- Weisman, A.D., Worden, J.W., and Sobel, H. (1980). *Psychological screening and intervention with cancer patients*. Project Omega Boston: Harvard Medical School.
- Wortman, C.B. and Dunkel-Schetter, C. (1979), Interpersonal relationships and cancer : a theoretical analysis. *Journal of Social Issues*. 35, 120-155.



K
ba

pl
co
th
A

—
*
*
*
*

DOCTOR-PATIENT COMMUNICATION IN HEALTH CARE: ISSUES AND CHALLENGES

Asher Andrew*, Vincent Kallavarapu**, Marlyn Thomas***
and Sunayana Swain****

ABSTRACT

Effective doctor-patient communication acts as a fulcrum in accommodating a smooth transition from doctor centered communication to the patient centered communication in the health care system. This review presents the significance of the doctor-patient communication health care scenario. The benefits and barriers of doctor-patient communication and the methods to enhance the doctor-patient communication are reviewed. The present qualitative and quantitative measurements of doctor patient communication are critically analyzed. Endorsing that communication is a two way process, this review suggests the need for quantifying the communication based on the bidirectional approach of communication.

Keywords: Doctor-patient communication, relevance, measurement, benefits, barriers.

INTRODUCTION

For a remarkable transformation of health care system, communication plays a decisive role as a cost effective strategy. Veritably, doctor-patient communication is one of the most essential dynamics in health care, affecting the course of patient care and clinical adherence (Matusitz & Spear, 2014). According to Schofield (2004), *'effective communication was a drug that could*

* MOMA Scholar, Centre for Health Psychology, University of Hyderabad, Hyderabad-500046

** Junior Research Fellow, ICMR, Centre for Health Psychology, University of Hyderabad, Hyderabad-500046

*** Junior Research Fellow, ICMR, Centre for Health Psychology, University of Hyderabad, Hyderabad-500046

**** Lecturer, St. Francis College for Women, Hyderabad.

be prescribed!' as the patient gains therapeutic benefit just from venting concern in a safe environment with a caring clinician. The clinical adherence is high among the patients who have knowledge about the illness and good communication with the doctor (Conthe et al., 2014). This lays an emphasis on a patient centred approach in health communication process.

WHY PATIENT CENTRED COMMUNICATION?

Historically in medicine, there was a paternalistic approach to decide what should be done for a patient—the doctor knew the best and the patient accepted the recommendation without question. This era has come to an end, being replaced with consumerism and the movement toward shared decision-making. Patients are advised to educate and ask questions. Patient satisfaction with the care rests heavily on how successfully this transition is accomplished. Ready access to quality information and thoughtful patient-doctor discussions is at the fulcrum of this revolution.

Good doctor-patient communication has the potential to help regulate patients' emotions, facilitate comprehension of medical information, and allow for better identification of patients' needs, perceptions and expectations (van Zanten, Bouleuc, McKinley, DeChamplain, & Jobe, 2007; Bredart, Bouleuc, & Dolbeault, 2006; Arora, 2003; Platt & Keating, 2007). Thus the shift from doctor centered communication to the patient centered communication has begun. As a result, a majority of patients are preferring family doctor over super specialists. Unfortunately Indian system has moved away from the age old practice of having family doctors.

Research evidence in the past three decades has proved that doctor-patient communication plays a pivotal role in delivery of high quality patient-centered health care (Golin, Thorpe, & DiMatteo, 2007). With the paradigm shift from biomedical to biopsychosocial approach in health care, the professional assessment of health providers also demands the skills of patient centred communication in addition to professional knowledge and technical skills (Mead & Bower, 2000). This is because the patient who suffers from a disease and seeks treatment does so in a psychosocial context.

It is essential to know if the patient is high on anxiety and depression (which impacts the cognition and thus the memory to be regular with medication), has a social support network of family and friends to aid in therapeutic adherence (that includes diet, exercise and other lifestyle factors) and the economic status to afford the medication and other treatment regimen prescribed. Such considerations can play a role in treatment line only when the doctor-patient communication in the initial consultation is effective to provide an insight to the doctor on the patient's psychosocial background. Once this is achieved, further process of health care ropes in the patient and family in major decision making which successfully enforces sharing of responsibility on both the patient and the

doctor. Such patient-centered care through biopsychosocial approach helps in developing a therapeutic alliance between the doctor and the patient, where inputs on patients' preferences and doctors' professional advice receive considerable assessment in the best of optimal outcome. In this process the doctor and the patient develop a bond where the patients' trust in the doctor goes beyond the perceived components like clinical competence and describes the doctor as 'supportive' and 'humane'.

Thus, while endorsing the doctor as a professional, the patient also perceives the important human face in the doctor which is very essential in developing a relationship. Thus effective communication skills are required for a patient-centered approach, emphasizing on building rapport through the use of empathy, listening skills and non-verbal communication skills (Platt & Gordon, 2004). Therefore, the health communication that takes a biopsychosocial approach forms a reciprocal relationship between the doctor and the patient.

SIGNIFICANCE OF DOCTOR-PATIENT COMMUNICATION

The ultimate aim of doctor-patient communication is to improve patient's health and optimize medical care (Duffy et al., 2004). With optimal adherence, the prognosis is expected to be the best (Swain, 2013). The basic elements of doctor-patient communication are to build the relationship, create a path for the discussion between the doctor and the patient, gather information about the patient's problems and issues, and to mutually decide the plan of action to handle them (Makoul, 2001).

A substantial body of evidence shows that effective communication between the doctors and the patients can lead to positive outcomes for patients, for doctors and others. A healthy doctor-patient communication leads to creating a good interpersonal relationship, exchange of information between the doctor and patient, and facilitates the decision-making process (Ha, Anat, & Longnecker, 2010). Studies give evidence that links effective doctor-patient communication to desirable health outcomes such as improved adherence to treatment and improved prognosis (Swain, 2013), lower patient stress levels and higher physician satisfaction (Guadagnino & Branch, 2006).

INDIAN SCENARIO: A CHALLENGE

A recent Indian statistics reveal that, because of its dramatic doctor-patient ratio of 1:1800, (Deo, 2013) India is listed under countries with critical shortage of health service providers. The average time a physician interacts with a patient is progressively becoming shorter across the globe and more so in India (Thomas, Hariharan, Rana, Swain, & Andrew, 2014). While the reason in Indian scenario can be attributed to the disproportionately large number of patients the doctor has to see in a day compared to his/her counterpart in the West, one cannot ignore the fact that technology dependence in health care is compelling the

doctors to distribute the time between the patients and computers and other electronic gadgets. This has reduced the average doctor-patient interaction time to something between two to ten minutes (Deveugele, Derese, van den Brink, Muinen, Bensing, & Maeseneer, 2002). Groopman's (2007) study found that a patient on an average is given just 18 seconds to describe the symptoms before the doctor interrupts which greatly increases the scope of making errors in diagnosis and treatment plans. With a desirable ratio between doctors and patients, if this is the state of affairs in developed countries, with the given doctor-patient ratio, the Indian scenario with respect to consultation time is anybody's guess. While this reality cannot be transformed overnight, the challenge lies in accepting this reality and optimising time management and communication within the limited time.

Demand for effective doctor-patient communication assumes added significance in the light of chronic illness replacing acute problems, which can be attributed to life style changes. The non-communicable diseases (NCDs) demand effective lifelong management. The NCDs are viewed as epidemic posing the greatest global challenge to the 21st Century (Murray & Lopez, 1996; Reddy, 2003). Collectively, NCDs account for 63% of all deaths worldwide with 80% of those taking place in developing countries (Narayan, Ali, & Koplan, 2010; WHO, 2013). According to a report by WHO (2002), it is expected that chronic diseases will account for 73% of deaths and 60% of the global disease burden by 2020, and also for major percentage of diseases and deaths in India. Treatment of NCDs, like diabetes, hypertension, asthma, cancer or HIV/AIDS, demand a dire need of life style changes along with medication. This calls for skills of counseling involving the competence to motivate the patient to enhance health promoting behaviours and minimise health risk practices.

These diseases being asymptomatic are termed as silent killers. The asymptomatic characteristic of the disease is likely to prompt the patient to undermine the potential dangers of non-adherence. Unless the doctor impresses upon the patient the asymptomatic nature of the disease and the devastating impact on the prognosis, it would lead to lethal consequences. It is essential that communication of the doctor includes the significance of adherence to medication, diet, exercise and self-monitoring and also highlight the alarm signals that warrant immediate medical consultation. Such communication needs to be powerful with emphasis added at right places and also must be reinforced in subsequent consultation.

QUALITY OF DOCTOR-PATIENT COMMUNICATION: IT'S CONTRIBUTIONS

Impact on Patient Adherence

Among all the consequences of doctor-patient communication, the most outstanding effect is seen in the form of increased clinical adherence in the

patients and subsequently improved prognosis. Adherence is defined as the regularity and punctuality with which the patients takes the prescribed medication, follows the diet and exercise regimen (Hall, Willgoss, Humphrey, & Kongso, 2014). Effective communication from doctors in terms of explanation, feedback, sharing of medical data was found to have enhanced adherence in patients (Tongue, Epps, & Forese, 2005; Platt & Keating, 2007; Chen et al., 2007). Friedman et al. (2008) reported that patients who received less information from their doctors showed poor adherence. Gaps in the doctor-patient communication like uni-dimensional decision making, and physicians' lack of knowledge of patients, indicating sub-optimal communication, lead to non-adherence that adversely affects the health status of patients (Wilson et al., 2007).

Impact on Patient Mental State and Doctor-patient Relationship

The holistic approach to health care views the patient not just as a bearer of a disease, but as an individual and as a physical, psychological and social and spiritual entity. Hence apart from the treatment of the disease, the concomitant implication on affect, cognition, behaviour and other social aspects such as financial pressures and social relationships receive their due importance. In this context the impact of high quality doctor-patient communication can be perceived in all the dimensions mentioned above. Higher quality of doctor-patient communication leads to mutual understanding, patient satisfaction, trust, bilateral involvement in decision making, agreement about treatment, and patient motivation (Street et al., 2009).

Better intermediate outcomes include better adherence and self-care by patients, both of which lead to improved health outcomes (Moore et al., 2004). Effective communication is also found to reduce psychological distress in patients along with higher rate of symptom reduction and better prognosis (Golin et al., 2007). Studies have proved that direct communication and support have a significant role in reducing visits to emergency department (Bolton, Tilley, Kuder, Reeves, & Schutz, 1991) and control of chronic illness (Tildesey, Mair, Sharpe, & Piaseczny, 1996). Literature has shown that effective communication in medical treatment leads to improved health, functional and emotional status, adherence to treatment regimen, doctors' satisfaction, and reduced medical malpractice risk (Wong & Lee, 2006). Effective communication has also been shown to manage post-operative pain in surgical patients (Sugai, Deptula, Parsa, & DonParsa, 2013).

Patients seem to have a clear preference for doctors based on the quality of communication. In a study by Schattner, Rudin, and Jellin (2004), it is reported that 38% of patients selected physicians on the basis of their professional expertise while 30% selected on the basis of physicians' patience and attentiveness, informing the patient, representing the patient's interests, being truthful and

respecting patient's preferences. Except the professional expertise, rest of factors can be translated as outcomes of effective communication between doctor and the patient.

Consulting the doctors high on quality of communication is found to be key for patient satisfaction. In a qualitative study by Anden, Andersson, & Rudebeck (2005), it is reported that the patients' perception of the outcome of clinical consultation is greatly determined by the patients' understanding of communication leading to improved satisfaction. In a review study of interventions on cancer patients, the results revealed the importance of effective doctor-patient communication in promoting patient satisfaction with the health care (Bredart, Bloulec, & Dolbeault, 2005). The results of the review emphasized the use of various strategies that improved patient satisfaction and resulted in positive health outcomes, effective doctor-patient communication being one of the major strategy.

Impact on Doctors

The positive impact is not just limited to patient benefit. The doctor is an equal beneficiary of high quality doctor-patient communication. For the doctor, the process of diagnosis involves three sequential and overlapping steps viz. data gathering, data integration and verification of diagnosis (Kuhn, 2002). Effective doctor-patient communication plays a pivotal role in collecting relevant data from the patient. It may be an exaggeration to state that this preliminary process determines the line of investigation through laboratory tests and further invasive diagnostic tests to arrive at a final diagnosis. In addition to this the studies have pointed out the positive impact that good doctor-patient communication has on the doctor job satisfaction and productivity (Haas et al., 2000).

Physician satisfaction more often than not is linked to patient satisfaction with the health care service that they receive. Satisfied patients are advantageous for doctors in terms of greater job satisfaction, less work-related stress, and reduced burnout (Bredart et al., 2005). Satisfied patients are less likely to lodge formal complaints or initiate malpractice complaints on doctors (Brinkman et al., 2007).

Overall Outcome

The overall outcome of healthcare involves, democratic decision making, improved mutual trust and better doctor-patient relationship. Shared-decision making ensures shared responsibility which binds the patient to clinical adherence. Active doctor-patient communication facilitates communication of doctor's empathy to the patient. This lays the foundation for the trust in the relationship that breaks the ice facilitating the patient to unleash the fears, anxiety, and apprehension. Such interaction provides a scope for the doctor to effectively address the patients' emotions. This process helps in easing the emotional state

of the patient. Further, the effective communication of the doctor, through information exchange enhances the knowledge base of the patient about the disease, adherence requirements, which in turn help in giving desirable direction to the health behaviour of the patient. While the doctor's communication skills contributes in the ways described above, it is also true that equal participation of the patients creates a sense of partnership and involvement in decision making. This in turn contributes to the internal locus of control. Once the internal locus of control is stimulated and reinforced, the adherence behaviour is likely to be high and sustained. One may wonder, when quality communication has such inherent advantages casting its multifaceted impact, what prevents the practice of quality communication between the doctors and patients?

BARRIERS TO DOCTOR-PATIENT COMMUNICATION

Emerging data suggest a high prevalence of communication breakdowns among physicians, patients, and important members of the health care services who assist with the diagnostic process (Gandhi, 2005; Singh et al., 2007; Sutcliffe, Lewton, & Rosenthal, 2004). In a study on patients with abnormal mammograms, one third of the women in the sample reported not to have received appropriate follow-up (Poon et al., 2004). This indicates the barriers in communication can be possibly be caused by either the doctor or the patient or both.

In the context of doctor-patient communication, various socio-economic factors like age, gender, and educational qualification are seen to affect the communication. Studies identified that patients' age is a major determinant of the doctor's quality of listening (Govender & Penn-Kekana, 2007). In a study on elderly patients, it is found that doctors tend to communicate more in a patient-centered style with patients over the age of 65 years (Peck, 2011).

With regard to the gender, studies indicated an interaction between gender and income level posing a barrier in communicative style. A study conducted by Thorson and Johansson (2004) shows that woman patients of low income and status are described shy, hesitant and limited in their knowledge. They were found to verify with their husbands, family members and neighbours rather than adhering to the doctor's perception.

While the above study reported on differential behaviour by patients of two genders, there seems to exist a reciprocal relationship between the communication of doctors and patients. Bertakis, Franks, & Epstein, (2009) revealed that the doctors were more likely to have patient-centered style of interaction with female patients in comparison to male patients, suggesting that, women are more likely than men to express their feelings and talk about psychosocial issues.

The third barrier is educational level of the patient. Patients with a higher educational level have more skills and confidence in talking to their doctors and

tend to provide more information, ask more questions and speak longer to other patients. It was also found that highly educated patients are more expressive and opinionated. They also receive more diagnostic and health information than less educated people (Willems, De Maesschalck, Deveugele, Derese, & Maeseneer, 2005). To sum up, it is likely that more educated, higher income and older patients receive more information because they have communicative skills that elicit information from the doctors.

It is found that hospitalized patients with limited health literacy report poor communication in the domains of general clarity, responsiveness to patient concerns, and explanations of care compared with patients with higher health literacy (Kripalani, Jacobson, MugullaCawthon, Niesner, & Vaccarino, 2007; Katz, Jacobson, Veladar, & Kripalani, 2007).

Doctors are found to use medical jargons in their interaction with patients that is beyond the comprehension of patients. Doctor's use of complex medical language (Castro, Wilson, Wang, & Schillinger, 2007) may contribute to poor physician-patient communication. Extra care is to be taken while communicating with the patients in younger age group since younger participants have reported significantly lower level of knowledge of jargons than their older counterparts (Thomas, Hariharan, Rana, Swain & Andrew 2014). Cardiologists' communication involving jargons is, thus, not adequately reaching patients, specifically young adults. The use of such language leaves the patient confused and mystified, leading to poor comprehension of the doctor's instructions and consequently inappropriate health behaviour that may bring about adverse health effects. A recent study on 96 preoperative patients reveals that usage of medical jargon leads to patient's dissatisfaction (Fields, Freiberg, Fickenscher, & Shelley, 2008). The usage of jargons distances the doctors from their patients and therefore it was suggested that the emphasis should be on interaction with the patients rather than telling the patients (Fields et al., 2008).

The personality factors sometimes may play a very dominant role in the quality of communication which may sometimes even camouflage the other factors such as age, gender, education, or socio-economic factors. The quality of doctor-patient communication is not singularly impacted by the patient. The doctor as the health provider has a significantly high contribution in the quality of communication.

In order to deliver patient-centered care, the physician must be equipped and educated to serve as trusted advisor, educator, and counselor, as well as a medical expert, and must know how to encourage the patient's participation in the design and delivery of care. The caring component in doctor-patient communication manifests in the doctors expression of empathy, reassurance, support, positive reinforcements, psychosocial talk, sense of humour, and extension of courtesy (Beck et al., 2002). Communication is a two way process. When

the doctor is not proactive in sharing and initiating, the patient lacks encouragement for questions. Disregard for the patient's views, incomplete sharing of medical data with the patient, guarded discussion of the treatment effects, low response to the patient's remarks, lot of interruption in patients' speech are indicators of poor sharing in doctors' communication (Beck et al., 2002). A study conducted on 167 patients who have interacted on computer with virtual physicians who are simulated to show high and low caring, the high caring was found to lead to higher patient satisfaction (Cousin, Mast, Roter, & Hall, 2012).

Patient feedback is a valid reflection of doctor's quality of communication. Often the patients are found to complain about the duration of consultation that remains inadequate and hurried (Swaminathan, 2007). The pressure is felt more in times when there is a shortage of medical personnel. Given these circumstances, the doctors tend to fasten or even cut down on the consultation time. The lack of time is a constant factor associated with the doctors about which the patients are aware (Pollock & Grime, 2002).

Research has shown that apart from the patient and doctor factors, many other phenomena like patient's personality factors, doctor's personality factors influence the communication between the doctor and the patient, e.g. the social status of the patient. It is beyond the scope of the present review to enlist all the possible variables involved in this complex process.

METHODS FOR ENHANCING DOCTOR PATIENT COMMUNICATION

Primarily, training sessions on communication skills for the doctors is suggested (Finset, 2012). Several studies have reported that training the doctors in communication skills to meet the biopsychosocial needs of the patients is imperative (Chatterjee & Choudhury, 2011). In its report 'vision 2015', the Medical Council of India (2007) stressed on the importance on communication skills training of the doctors. Doctors need to individualize their communication to patients based on patients' needs and desires (Lazarus, 2013).

The need of the hour is acknowledging and training the health care professionals in effective communication skills leading to improved health care system, sensitizing clinicians to respond to patients' emotional cues, encouraging doctors to communicate without/with minimal use of medical terminologies (Terpstra, 2012), facilitating feedback from the patients after consultation, accelerating the empowerment of the patients (Chana, 2012), teaching doctor-patient communication skills during undergraduate medical curriculum (Egnew & Wilson, 2010; Sommer, Rieder, & Haller, 2011), promoting listening by the doctors (Snyder, 2008; Jagosh, Boudreau, Steinert, Macdonald, & Ingram, 2011) and involving family members (Kuzari, Biderman, & Cwikel, 2013; Guenter, Gillett, Cain, Pawluch, & Travers, 2010). All these are found to contribute

towards a correct diagnosis, enhance healing, apart from boosting the doctor-patient relationship. While doctor-patient communication is given heavy emphasis and innovative interventions are suggested to enhance the quality, the central question around which the entire issue revolves relates to the method of measuring the quality.

MEASUREMENT OF DOCTOR-PATIENT COMMUNICATION

Measuring communication is a challenging task. Health communication researchers have devised numerous ways to identify, measure, quantify and categorize doctor-patient communication. Doctor-patient communication can be studied using qualitative and quantitative approaches. Quantitative approaches have focused on measuring aspects such as information exchange, shared decision making, patient enablement, verbal dominance, and communication control (Collins, Britten, Ruusuvori, & Thomson, 2007). In qualitative approaches, the focus of measurement is on professional responsibility and behaviour, and on details of observed and recorded communication in consultations, as well as on the structure of consultation and its phases (Collins et al., 2007). Quantitative approaches have used Interaction Analysis System (IAS), such as the Role Interaction Analysis System (RIAS), Brown University Interpersonal Skill Evaluation (BUISE), Communication Assessment Tool (CAT), and Doctor-Patient Communication Inventory (DPCI).

The qualitative approach uses the method of coding the videotaped content of clinical consultations. The measurement comprises of both the verbal and non-verbal behaviour. The coding systems provide useful information like the extent to which patients talk in the consultation, factors influencing the interpersonal effectiveness of the health professional, such as length of consultation or continuity of care and communication competence of the doctors.

The problem with the coding systems relates to arbitrariness of relationship between coded actions. For example, it fails to connect doctor's communication style to the patient's level of information about their diagnosis, prognosis and treatment options. Further it speaks nothing about how the length of the consultation might have influenced the discussion of issues between the doctor and the patient. Further, these methods fail to capture the functional aspects related to the exchange of information about the present health status of the patient, dosage of medication, adverse effects, alarm signals, etc which contribute to a strong logical base for adherence.

Campbell, Lockyear, Laidlaw, and Macleod (2007) developed a Matched-Pair Instrument (MPI) to measure the communication skills of the doctor in terms of process and content. In a study on physician-patient communication behaviour on HIV patients in Kenya, Wachira, Middlestadt, Rejee, Peng, and Braitstein (2013), reported that the MPI failed to capture the patient's role in the communication behaviours as usually the case with patient-centered communication measures.

The major qualitative approach for analyzing doctor-patient communication is through the use of content analysis. Conversation Analysis (CA) is one such method of content analysis that measured the communication using themes such as the themes that discussed the interrelationship between the patient's concerns and the biomedical agenda. In CA research, the consultation is regarded as consisting of phases of activities based on video or audio recordings of actual consultations. The phases observed in doctor-patient consultations are the opening of the consultation, the problem presentation, verbal examination (including history-taking), physical examination, discussions of treatment and closing. Various studies have used CA to study doctor-patient communication quality (Gafaranga & Britten, 2003; Heritage & Robinson, 2006).

Heritage and Maynard's (2006) review of the CA literature on patients' participation in the consultations revealed that patients had less opportunity to participate in diagnosis than in the treatment phase. CA studies concentrate on analyzing the process of interaction and cannot adequately deal with other equally relevant dimensions of the process of patient participation, such as what the patient could not reveal in the consultation, like what the patient said 'between the lines'.

NEED FOR QUANTIFICATION OF DOCTOR-PATIENT COMMUNICATION

Communication is a two-way process and the degree of the quality of communication is dependent on whether the receiver comprehended the message the way the sender intended it to be. In clinical context, it transforms into whether the patient comprehended what the doctors communicated. In a way, the patient has to validate his/her understanding about the doctor's instructions. Only a method that matches these two aspects can be considered as the one that is complete and objective.

The discussion based on the review clearly suggests the cost effectiveness of doctor-patient communication in the present context of health care and management. Given the high doctor-patient ratio resulting in low consultation time, optimising the quality of doctor patient communication remains a challenge. The only way this challenge can be met is by integrating innovative techniques and approaches of validating doctor-patient communication in the medical curriculum, reinforced by in service training programmes and involvement of Health Psychologists in developing disease specific check lists and communication packages for use in consultation. However the major lacunae in evaluating the effectiveness of this would be appropriate tool and method of measuring doctor-patient communication involving the communicator and receiver on the one hand and covering the content, affect and behaviour on the other. Concerted efforts are called for in health care research to fill this void. Therefore a reliable and valid method for measuring bi-directional communication is the need of the hour to replace the unidirectional approach.

Journal of Indian Health Psychology

REFERENCES

- Anden, A., Andersson, S. O., & Rudebeck, C. E. (2005). Satisfaction is not all: Patient Perception of outcome of general practice consultations, a qualitative study. *British Medical Practice*, 6(43). doi: 10.1186/1471-2296-6-43
- Arora, N. (2003). Interacting with cancer patients: the significance of physician communication behavior. *Social Science & Medicine*, 57(5), 791-806.
- Beck, R.S., Daughtridge, R., & Sloane, P.D. (2002). Physician-patient communication in the primary care office: a systematic review. *The Journal of the American Board of Family Practice*, 15(1), 25-38.
- Bertakis, K.D., Franks, P., & Epstein, R.M. (2009). Patient-centered communication in primary care: physician and patient gender and gender concordance. *Journal of Women's Health (Larchmt)*, 18(4), 539-545. doi: 10.1089.jwh.2008.0969.
- Bolton, M.B., Tilley, B.C., Kuder, J., Reeves, T., & Schutz, L.R. (1991). The cost and effectiveness of an education program for adults who have asthma. *Journal of General Internal Medicine*, 6(5), 401-7.
- Bredart, A., Bloulec, C., & Dolbeault, S. (2005). Doctor-patient communication and satisfaction with care in oncology. *Current Opinion in Oncology*, 17(14), 351-354.
- Brinkman, W.B., Geraghty, S.R., Lanphear, B.P., Khoury, J.C., Gonzalez del Rey, J.A., Dewitt, T.G., et al. (2007). Effect of multisource feedback on resident communication skills and professionalism: a randomized controlled trial. *Archives of Pediatrics & Adolescent Medicine*, 161(1), 44-49.
- Campbell, C., Lockyear, J., Laidlaw, T., & Macleod, H. (2007). Assessment of a matched-pair instrument to examine doctor-patient communication skills in practising doctors. *Medical Education*, 41(2), 123-129.
- Castro, C.M., Wilson C., Wang, F., & Schillinger, D. (2007). Babel babble: physicians' use of unclarified medical jargon with patients. *American Journal of Health Behavior*, 31(Suppl 1), S85-S95.
- Chana, P. (2012). Patient empowerment: a new dimension in doctor-patient relationship. *Revista Médica De Chile*, 140, 404-405.
- Chatterjee, S. & Choudhury, N. (2011). Medical communication skills training in the Indian setting: need of the hour. *Asian Journal of Transfusion Science*, 5(1), 8-10.
- Chen, W.T., Starks, H., Shiu, C.S., Fredriksen-Goldsen, K., Simoni, J., Zhang, F., et al. (2007). Chinese HIV-positive patients and their healthcare providers: contrasting Confucian versus Western notions of secrecy and support. *ANS Advances in Nursing Science*, 30(4), 329-342.
- Collins, S., Britten, N., Ruusuvo, J., & Thomson, A. (Eds.). (2007). *Patient Participation in Health Care Consultations*. Berkshire, England: Open University Press.
- Cothe, P. et al., (2014). Treatment compliance in chronic illness: Current situation and future perspectives. *Revista clínica espanõla*, 2565(14), 127-131. doi:10.1016/j.rce.2014.03.008.
- Cousin, G., Mast, M. S., Roter, D., & Hall, J.A. (2012). Concordance between physician communication and patient attitudes predict patient satisfaction. *Patient Education & Counseling*, 87(2), 193-197. doi:10.1016/j.pec.2011.08.004.

- Deo, M.G. (2013). Doctor population ratio for India- the reality. *Indian Journal of Medical Research*, 137(4), 632-35.
- Deveugele, M., Derese, A., van den Brink-Muinen, A., Bensing, J., & De Maeseneer, J. (2002). Consultation length in general practice: cross sectional study in six European countries. *British Medical Journal*, 325, 472. doi: 10.1136/bmj.325.7362.472
- Duffy, F. D., Gordon, G. H., Whelan, G., Cole-Kelly, K., Frankel, R., Buffone, N., et al. (2004). Assessing competence in communication and interpersonal skills: The Kalamazoo II report. *Academic Medicine*, 79, 495-507.
- Egnew, T.R. & Wilson, H.J. (2010). Faculty and medical students' perceptions of teaching and learning about the doctor-patient relationship. *Patient Education and Counseling*, 79, 199-206. doi: 10.1016/j.pec.2009.08.012
- Fields, A.M., Freiberg, C.S., Fickenscher, A., & Shelly, K.H. (2008). Patients and jargon: are we speaking the same language? *Journal of Clinical Anesthesia*, 20(5), 343-346. doi: 10.1016/j.jclinane.2008.02.006
- Finset, A. (2012). "I am worried, Doctor!" Emotions in the doctor-patient relationship. *Patient Education and Counseling*, 88, 359-363. doi: 10.1016/j.pec.2012.06.022
- Friedman, D.S., Hahn, S.R., Gelb, L., Tan, J., Shah, S.N., Kim, E.E., et al. (2008). Doctor-patient communication, health-related beliefs, and adherence in glaucoma: results from the glaucoma adherence and persistency study. *Ophthalmology*, 115(8), 1320-1327. doi: 10.1016/j.ophtha.2007.11.023
- Gaifaranga, J. & Britten, N. (2003). "Fire away": the opening sequence in general practice consultations. *Journal of Family Practice*, 20(3), 242-247. doi: 10.1093/fampra/cm303
- Gandhi, T.K. (2005). Fumbled handoffs: one dropped ball after another. *Annals of Internal Medicine*, 142(5), 352-358.
- Golin, C.E., Thorpe, C., & DiMatteo, M.R. (2007). Accessing the patient's world: patient - physician communication about psychosocial issues. In J.A.L. Earp E.A. French, and M.B. Gilkey *Patient Advocacy for Health Care Quality: Strategies for Achieving Patient-Centered Care*. Sudbury, MA: Jones and Bartlett Publishers.
- Giovender, V. & Penn-Kekana, L. (2007). Gender biases and discrimination: a review of health care interpersonal interactions. Background paper prepared for the Women and Gender Equity Knowledge Network of the WHO Commission on Social Determinants of Health. Retrieved August 20, 2013 from http://www.who.int/social_determinants/resources/gender_biases_and_discrimination_wgkn_2007.pdf
- Groopman, J. (2007). *How doctors think*. New York: Houghton Mifflin Company.
- Guadagnino, C. & Branch, W. (2006). Physician-patient communication. *Physician's News Digest*. Retrieved January 13, 2013 from www.physiciannews.com/cover/706.html
- Guenter, D., Gillett, J., Cain, R., Pawluch, D., & Travers, R. (2010). What do people living with HIV/AIDS expect from their physicians? Professional expertise and the doctor-patient relationship. *Journal of the International Association of Physicians in AIDS Care (Chicago)*, 9, 341-345. doi: 10.1177/1545109710370486
- Ha, J.F., Anat, D.S., & Longnecker, N. (2010). Doctor-patient communication: a review. *The Ochsner Journal*, 10, 38-48.
- Haas, J. S., Cook, E. F., Puopolo, A. L., Burstin, H. R., Cleary, P. D., & Brennan, T. A. (2000). Is the professional satisfaction of general internists associated with patient satisfaction? *Journal of General Internal Medicine*, 15(2) 122-128.

- Hall, R.L., Willgoss, T., Humphrey, L.J., & Kongso, J.H. (2014). The effect of medical device dose-memory functions on patients' adherence to treatment, confidence and disease self-management, *Patient Preference and Adherence*, 8, 773-788. doi: <http://dx.doi.org/10.2147/PPA.S61248>
- Heritage, J. & Maynard, D. (Eds.). (2006). *Doing Medicine: Structure and Process in Primary Care Encounters*. Cambridge: Cambridge University Press.
- Heritage, J. & Robinson, J.D. (2006). The structure of patients' presenting concerns and physicians' opening questions. *Health Communication*, 19(2), 89-102.
- Jagosh, J., Boudreau, D.J., Steinert, Y., Macdonald, M.E., & Ingram, L. (2011). The importance of physician listening from the patients' perspective: enhancing diagnosis, healing, and the doctor-patient relationship. *Patient Education and Counseling*, 85, 369-374. doi:10.1016/j.pec.2011.01.028
- Katz, M.G., Jacobson, T.A., Veledar, E., & Kripalani, S. (2007). Patient literacy and question-asking behavior during the medical encounter: a mixed-method analysis. *Journal of General Internal Medicine*, 22(6), 782-786. doi: 10.1007/s11606-007-0184-6
- Kripalani, S., Jacobson, T.A., Mugulla, I.C., Cawthon, C.R., Niesner, K.J., & Vaccaro, V. (2010). Health literacy and the quality of physician-patient communication during hospitalization. *Journal of Hospital Medicine*, 5(5), 269-275. doi: 10.1002/jhm.100
- Kuhn, G. J. (2002). Diagnostic errors. *Academic Emergency Medicine*, 9(7), 740-750.
- Kuzari, D., Biderman, A. & Cwikel, J. (2013). Attitudes of women with breast cancer regarding the doctor-patient relationship. *European Journal of Cancer Care (English)*, 22, 589-596. doi: 10.1111/ecc.12063
- Lazarus, A. (2013). Can we talk? The search for common ground in the doctor-patient relationship. *The Journal of medical practice management*. 29(3), 152-156
- Makoul, G. (2001). Essential elements of communication in medical encounters: the Kalamazoo consensus statement. *Academic Medicine: journal of the Association of American Medical Colleges*, 76(4), 390-393.
- Matusitz, J. & Spear, J. (2014). Effective doctor-patient communication: an updated examination. *Social Work and Public Health*, 29(3): 252-66
- Mead, N. & Bower, P. (2000). Patient-centeredness: a conceptual framework and review of the empirical literature. *Social Science & Medicine*, 51(7), 1087-1110.
- Medical Council of India (2007). Vision 2015. Delhi: Medical Council of India. Retrieved June 6, 2013 from http://www.mciindia.org/tools/announcement/MCI_booklet.pdf
- Moore, P.J., Sickel, A.E., Malat, J., Williams, D., Jackson, J., & Adler, N.E. (2004). Psychosocial factors in medical and psychological treatment avoidance: The role of the doctor-patient relationship, *Journal of Health Psychology*, 9, 421-433.
- Murray, C. & Lopez, A. (1996). *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries and Risk Factors in 1990*. Cambridge: Harvard University Press.
- Narayan, K.M.V., Ali, M.K., & Koplan, J.P. (2010). Global non-communicable diseases – where worlds meet. *New England Journal of Medicine*, 363, 1196-1198. doi: 10.1056/NEJMp1002024
- Peck, B.M. (2011). Age-related differences in doctor-patient interaction and patient satisfaction. *Current Gerontology and Geriatrics Research*, 2011, Article ID 137492. doi: 10.1155/2011/137492

- Platt, F.W. & Gordon, G.H. (2004). *Field Guide to the Difficult Patient Interview* (2nd Ed.). Philadelphia: Lippincott Williams & Wilkins.
- Platt, F.W. & Keating, K. N. (2007). Differences in physician and patient perceptions of uncomplicated UTI symptom severity: understanding the communication gap. *International Journal of Clinical Practice*, 61(2), 303-308.
- Pollock, K. & Grime, J. (2002). Patients' perceptions of entitlement to time in general practice consultations for depression: qualitative study. *BMJ Clinical Research Education*, 325(7366), 687.
- Poon, E.G., Haas, J.S., Louise Puopolo, A., Gandhi, T.K., Burdick, E., Bates, D.W., et al. (2004). Communication factors in the follow-up of abnormal mammograms. *Journal of General Internal Medicine*, 19(4), 316-323.
- Reddy, K.S. (2003). Prevention and Control of Non-Communicable Diseases. Retrieved September 26, 2010 from www.icrier.org/pdf/wp104.pdf
- Schattner, A., Rudin, D., & Jellin, N. (2004). Good physicians from the perspective of their patients. *BMC Health Services Research*, 4, 26. doi: 10.1186/1472-6963-4-26
- Schofield, T. (2004). Introduction. In E. MacDonald (Ed.), *Difficult Conversations in Medicine*. Oxford: Oxford University Press.
- Singh, H., Arora, H.S., Vij, M.S., Rao, R., Khan, M.M., & Peterson, L.A. (2007). Communication outcomes of critical imaging results in a computerized notification system. *Journal of the American Medical Informatics Association*, 14(4), 459-66.
- Snyder, U. (2008). The doctor-patient relationship II: not listening. *Medscape Journal of Medicine*, 10, 294.
- Sommer, J., Rieder, A. & Haller, D.M. (2011) Learning about family medicine and the doctor-patient relationship: student views. *Revue Médicale Suisse*, 7, 1100-1105.
- Street, R.L., Makaol, G., Arora, N.K. & Epstein, R.M. (2009). How does communication heal? Pathways linking clinician- patient communication to health outcomes, *Patient Education and Counseling*, 74, 295-301.
- Sugai, D.Y., Deptula, P.L., Parsa, A.A., & DonParsa, F. (2013). The importance of communication in the management of postoperative pain. *Hawaii Journal of Medicine & Public Health*, 72(6), 180-184.
- Sutcliffe, K.M., Lewton, E., & Rosenthal, M.M. (2004). Communication failures: an insidious contributor to medical mishaps. *Academic Medicine: journal of the Association of American Medical Colleges*, 79(2), 186-194.
- Swain, S. (2013). *Health Communication Between Doctors and Patients: Impact on Patients Adherence and Disease Prognosis* (Unpublished doctoral dissertation). University of Hyderabad, Hyderabad.
- Swaminathan, G. (2007). Doctor-patient communication: patient perception. *Indian Journal of Psychiatry*, 49(3), 150-153.
- Terpstra, O.T. (2012). On doctor-patient relationship and feedback interventions. *Perspectives of Medical Education*, 1, 159-161. doi: 10.1007/s40037-012-0030-3
- Thomas, M., Hariharan, M., Rana, S., Swain, S., & Andrew, A. (2014). Medical Jargons as Hindrance in Doctor-Patient Communication. *Psychological Studies*. Published Online 24 June 2014. doi:10.1007/s12646-014-0262-x
- Thompson, D.W. & Furlan, A.J. (1996). Clinical epidemiology of stroke. *Neurologic Clinics*, 14, 309-315.

- Thorson, A. & Johansson, E. (2004). Equality or equity in health care access: a qualitative study of doctors' explanations to a longer doctor's delay among female TB patients in Vietnam. *Health Policy*, 68(1), 37-46.
- Tildesey, H.D., Mair, K., Sharpe, J., & Piaseczny, M. (1996). Diabetes teaching – outcome analysis. *Patient Education & Counseling*, 29(1), 59-65.
- Tongue, J.R., Epps, H.R., & Forese, L.L. (2005). Communication skills for patient centered care. *Journal of Bone & Joint Surgery*, 87A(3), 652-658.
- van Zanten, M., Boulet, J.R., McKinley, D.W., DeChamplain, A., & Jobe, A.C. (2007). Assessing the communication and interpersonal skills of graduates of international medical schools as part of the United States Medical Licensing Exam (USMLE Step 2 Clinical Skills (CS) Exam. *Acta medica academica*. 82(10), S65-S68
- Wachira, J., Middlestadt, S., Reece, M., Peng, C.J., & Braitstein, P. (2013). Psychometric assessment of a physician-patient communication behaviors scale: the perspective of adult HIV patients in Kenya. *AIDS Research and Treatment*, 2013, Article ID 706191. doi: 10.1155/2013/706191
- Willems, S., DeMaesschakck, S., Deveugele, M., Derese, A., & De Maeseneer, J. (2005). Socio-economic status of the patient and doctor-patient communication: does it make a difference? *Patient Education and Counseling*, 56(2), 139-146.
- Wilson, I.B. Schoen, C. Neuman, P. Strollo, M.K., Rogers, W.H., Chang, H., et al. (2007). Physician-Patient Communication about Prescription Medication Nonadherence: A 50-State Study of America's Seniors. *Journal of General Internal Medicine*, 22(1), 6-12.
- Wong, Y.S. & Lee, A. (2006). Communication skills and doctor-patient relationship. *Medical Bulletin*, 11(3), 7-9.
- World Health Organization Report. (2002). *Integrated chronic disease prevention and control*. Retrieved December 10, 2012 from http://www.who.int/chp/about/integrated_cd/en/
- World Health Organization. (2013). 10 facts on noncommunicable diseases. Retrieved December 11, 2012 from http://www.who.int/features/factfiles/noncommunicable_diseases/en/

FUNCTIONING OF EMOTION AND POSITIVE HEALTH: A CO-RELATIONAL STUDY AMONG ADULTS

Renu and NovRattan Sharma***

ABSTRACT

At present, positive health has become a field of interest for psychologists. Positive health is the optimum level of health and excellent status of well-being of an individual. It includes satisfaction with life, self esteem, hope, happiness and well-being. It observes balance in each aspect of life. Positive health is affected by many factors like interpersonal relationship, functioning of emotion, economic status, daily life habits, etc. In this study, researchers have taken functioning of emotion. Functioning of emotion includes positive and negative emotions, emotion regulation and emotional competence. Scale of Psychological Well-being, Happiness Scale, Satisfaction with Life Scale, Self-Esteem Inventory, Hope scale, PANAS, Emotion Regulation Questionnaire and Emotional Competence Scale were used. These scales were administered on the adults of age group 30-45. Correlation was calculated between dimensions of positive health and dimensions of functioning of emotion. There was found a significant relationship between the dimensions of positive health and dimensions of functioning of emotion.

Keywords: Positive health, functioning of emotion, well-being, hope, satisfaction with life.

INTRODUCTION

Health has been an area of research from the decades. It has been derived from the word 'whole'. It has been seen as a state of harmony or balance. Health is the dynamic process of striving which ensures stability between inner as well as outer factors which are continuously changing. Now a day, the

* Research scholar at Department of Psychology, M. D. University, Rohtak.

** Professor, Department of Psychology, M. D. University, Rohtak.

concept of positive health has been emerged which originated due to the emergence of the positive psychology perspective. It not only focuses and emphasizes on best things in life but also develops control in life. We can say that positive health is like a reservoir of positive strengths, emotions and experiences which enables the person for effective dealing with adverse situations and it helps to grow better from adversities.

Positive health is a state where an individual feels a sense of energy, absence of bothersome; has confidence about the effectiveness of the functioning of his/her body; has feelings of high life satisfaction, well-being, happiness, hope and optimism; and has personal control over health (Yadava, Hooda, Sharma, 2012). These factors can also be said the indicators of positive health. Besides these there are also other indicators like good interpersonal relationships, healthy life style, proper functioning of emotions, absence of bad habits etc. In the present study, the authors have taken the functioning of emotions.

Before defining about functioning of emotions, dimensions of positive health will be discussed. There are following main dimensions of positive health:

- **Well-being:** Well-being is a complex construct. It is the wholesome of body, mind and spirit in terms of health, prosperity and self-actualization (Maslow, 1986). Myers and Diener (1995) define high subjective well-being as frequent positive affect infrequent negative affect and a global sense of satisfaction with life. It may be defined as the state of feeling healthy and happy, having satisfaction, relaxation, pleasure and peace of mind. It deals with people's feelings about everyday experiences in life activities. Such feelings may range from negative psychological states such as anxiety, depression, frustration, emotional exhaustion, unhappiness, and dissatisfaction to states which are identified as positive mental health (Jahoda, 1958). Mohan (2001) said that well-being is a scientific sounding term for what people usually mean by happiness; their cognitive and affective conclusions about their existence; maintaining equilibrium, having good health and practicing self-control, self realization and dissolution of self. Just as positive affect is not opposite of negative affect, well-being is not the absence of mental illness (Ryan and Deci, 2001).
- **Satisfaction with Life:** Life satisfaction is defined as a cognitive judgmental evaluation of one's life. It is the most consistent and stable variable of assessing an individual's well-being. It is a global assessment of a person's quality of life. Judgments of satisfaction are dependent upon comparisons of one's circumstances with what is thought to be an appropriate standard.
- **Hope:** Hope is a two-dimensional construct that involves a person's determination to pursue goal-directed behaviour (*i.e.*, agency) and one's ability to find ways to meet those goals (*i.e.*, pathways) (Snyder,

Harris, Anderson, Holleran, Irving, Sigmon, Yoshinou, Gibb, Langeland Harnay, 1991). Agency thinking reflects the 'will power' component of hope which includes motivation, will power, or a sense an individual has that he or she can meet goals. Pathways thinking reflects the 'way power' component of hope which includes the routes to the goal-specific plans, strategies or solutions. It is a goal-setting framework where hopeful individuals are determined to get what they want and can figure out how to do so. Snyder (2002) says that hope exists only when an individual has the motivation to remain engaged with a future outcome and can anticipate a way to reach that outcome. Snyder (2002) viewed hope as a cognitive set and not as an emotion.

- **Happiness:** In our everyday parlance, happiness refers to most generic state of feeling good. According to Russell (1958) happiness depends upon a friendly interest in persons and things. According to him "the more things a man has and less is interested in, the more opportunities of happiness he has and less he is at the mercy of fate, since if he loses one thing he can fall back upon another". Argyle, Martin and Lee (1995) believed that happiness is comprised of three related components, which are positive affect (pleasant mood and emotion), absence of negative effect (unpleasant mood and emotion) and satisfaction with life as a whole (Bhandari, 2005; Dwivedi, 2001; Joshi, 2006).
- **Self-esteem:** It is commonly used to refer to the evaluations people make and maintain of themselves. It includes attitudes of approval or disapproval and the degree to which people feel worthy, capable, significant, and effective. It is the evaluative component of the self-concept, a broader representation of the self that includes cognitive and behavioral aspects, as well as evaluative or affective ones (Garrety, Badham, Morrigan, Rifkin and Zanko, 2003; Leary, 1999a; 1999b). Self-esteem is a measure of individuals' expectations of positive events and, accordingly, their willingness to approach objects and others. Self-esteem is one's more or less sustained sense of liking oneself.
- **Functioning of emotions:** Emotions, derived from the French word 'émouvoir', are subjective experiences, often associate with mood, temperament, personality, and disposition. An emotion is associated with a wide variety of feelings, thoughts, and behaviour. Functioning of emotion concept is related to whether an individual is able to regulate his/her emotions

In functioning of emotion, three dimensions are included:

- **Positive and Negative Emotions:** Positive emotions such as joy, hope, optimism, love, contentment and gratitude help us to grow as a person, energize us for positive action, solve problems, improve the quality of our relationships and increase our sense of emotional well-

being. They broaden our range of thinking and actions. Negative emotions such as fear, anger or disgust prepare us mentally and physically to take an immediate action against an object, or situation that poses a threat.

- **Emotional Regulation:** Gross (2002) proposed a process model that specifies how emotions can be regulated at each of the many steps in the process through which emotions are generated. It describes individual differences in how people regulate their emotions through growth, specifically the ways they attempt to regulate their emotions, by denying, intensifying, weakening, curtailing, masking, or completely hiding them. It is also described as the process in which people modify their emotional reactions and the coping processes that increase or decrease the intensity of the moment. There are two common emotion regulation strategies: reappraisal (changing the way one thinks about a potentially emotion-eliciting event) and suppression (changing the way one responds behaviorally to an emotion-eliciting event). Experimental findings demonstrate that reappraisal has a healthier profile of short-term affective, cognitive, and social consequences than suppression.
- **Emotional Competence:** It is the integrative term for skills that concern the accurate or effective perception, comprehension, regulation, and utilization of affect and affective information. These are closely connected and relate to a single higher-order factor (Mayer, Caruso, & Salovey, 2000; Roberts, Zeidner and Matthews, 2001; Wong & Law, 2002). Saarni (1990, 1999) said that it consists of a number of distinct, yet interrelated component skills including emotion appraisal, emotion expression and emotion understanding.

A number of studies have been done to find out the relationship of these factors and significant relationships have been found between these factors.

METHOD

Problem

To study the relationship of positive health with functioning of emotions.

Objectives

- To assess relationship between dimensions of functioning of emotion (positive and negative emotions, emotional regulation and emotional competence) and factors of positive health (well being, self esteem, satisfaction with life, happiness and hope) of adult respondents.

Hypotheses

- There would be significant relationship between dimensions of functioning of emotion (positive and negative emotions, emotional regulation and emotional competence) and factors of positive health

(well being, self esteem, satisfaction with life, happiness and hope) of adult respondents.

Sample

For the purpose of the present study 100 educated adults of age group 30-45 years were selected on the basis of availability. These respondents were from both gender (male and female).

Tools

For the purpose of the present study following measures were used:

- **Positive and Negative Affect Schedule (PANAS):** PANAS constructed by Watson, Clark and Tellegen (1988) was used to assess positive and negative emotions. It has 20 items. Respondents are asked to indicate to what extent, they have experienced each specific emotion in the past week. Each item is rated on a 5 point Likert scale ranging from 1 (very slightly or not at all) to 5 (very much or extremely). There has been considerable support for the construct validity of the PANAS. Furthermore, estimates of internal consistency have been found to range from .86 to .90 for the positive affect scale, and from .84 to .97 for the negative affect scale. The PANAS reliability using Cronbach's alpha internal consistency in the present study was $=.90$.
- **Emotion Regulation Questionnaire:** Emotion regulation questionnaire given by Gross and John (2003) was used to assess emotion regulation. This scale measures two emotion regulation strategies: Reappraisal and Suppression. The scale consists of ten items (6 reappraisal items and 4 suppression items). Higher scores indicate more frequent use of each strategy. Participant's reply to all items using a scale ranging from 1 (strongly disagree) to 7 (strongly agree). Gross and John (2003) proved ERQ validity via factor analysis. Alpha reliability for both Reappraisal and Suppression factors ranged from .73 to .88 (Gross and John, 2003). The ERQ reliability applying Cronbach's alpha internal consistency is $=.74$.
- **Emotional Competence Scale:** In order to measure emotional competence the scale developed by Sharma and Bhardwaj (1995) was used. The scale consists of five different emotional competencies. They are: adequate depth of feeling, adequate expression and control of emotions, ability to function with emotions, ability to cope with problem emotions, and encouragement of positive emotions. It is a five point scale based on the lines of Likert having five alternatives for each item. Scoring of these five alternatives followed a system of 1, 2, 3, 4, and 5 from upper end to lower end. The obtained five competency scores were converted into Z-scores. The reliability of this scale is .75 and its validity is .66.

- **Scale of Psychological Well Being (SPWB):** Scale of psychological well being developed by Ryff (1989) was used to assess well being. It consists of 54 statements. It assesses six distinct dimensions of well being. These are- autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self acceptance. It is likert scales consisting of six alternatives- strongly disagree, moderately disagree, slightly agree, moderately agree and strongly agree. There is no time limit for completing the scale. The Cronbech alpha reliability of this test is .95 and its internal consistency is .88 to .91.
- **Satisfaction with Life Scale:** Satisfaction with life scale developed by Diner, Emmons, Larson and Griffin (1985) was used to assess life satisfaction. It has 5 items and is based on seven point Likert type scale. The test- retest coefficient correlation is of this test is .87 and its Cronbech alpha coefficient is .92.
- **Subjective Happiness Scale:** Happiness was assessed using the subjective happiness scale (SHS; Lyubomirsky & Lepper, 1999). This well-validated instrument composed of four 7-point items provides a global, subjective assessment of whether one is a happy or an unhappy person, that encompasses both emotional and cognitive well-being ($\alpha = .85$).
- **The Trait Hope Scale:** This scale was given by Snyder, Harris, Anderson, Holleran, Irving, Sigmon, Yoshinou, Gibb, Langelles and Hamay (1991). It consists of 12 items related to future time value, present time value, future planning and time pressure. It is 8 point likert scale.
- **Self Esteem inventory:** Self esteem was measured with self esteem inventory given by Rosenberg (1965). It consists of 10 items. The RSE is a measure of global self-esteem. The validity of the measure is well established and the reliability of the measure is $\alpha = .86$. Items were answered on a four-point scale.
- **Procedure:** Each participant was contacted individually and was clearly informed about the purpose of the study. After establishing the rapport, he/she was asked to understand the general instructions, however the instructions for specific tests were provided separately. Informed and oral consent from each subject was taken. When the subject was comfortable and ready for testing, questionnaires/ tests were given and were asked to answer each and every item of all the administered questionnaires and ensured that the responses will be kept confidential. After that analysis of the data was done with the help of SPSS and then the result was discussed.

RESULTS AND DISCUSSION

Results of the following study can be shown by the following table:

TABLE 1
Table showing correlation between Dimensions of functioning of emotion and Factors of Positive Health

	Autonomy	Environmental mastery	Personal growth	Positive relation with others	Purpose in life	Self acceptance	P. well being	SWL	Agency	Pathway	Hope	Happiness	Self Esteem
positive	.275**	.287**	.153	.358**	.357**	.305**	.389**	.207*	.429**	.368**	.459**	.382**	.296**
negative	-.362**	-.298**	-.205*	-.393**	-.282**	-.302**	-.413**	-.066	-.259**	-.334**	-.337**	-.388**	-.302**
reappraisal	.112	.178	.130	.260**	.086	.208*	.218*	.120	.070	.279**	.225*	.242*	.193
suppression	-.090	-.190	-.031	-.191	-.209*	-.100	-.185	-.085	-.128	-.139	-.152	-.123	-.016
Adequate	.037	-.099	-.101	-.042	-.117	-.042	-.081	-.173	.006	-.065	-.019	-.013	-.081
depth of feeling													
adequate	.171	.174	.207*	.186	.222*	.138	.247*	.154	-.050	.025	-.003	.153	.203*
expression and													
control of emotions													
ability to	.200*	.036	.108	.133	-.074	-.056	.077	.086	.052	.194	.155	.161	.126
function with													
emotions													
ability to cope	.471**	.251*	.277**	.327**	.221*	.164	.384**	.245*	.292**	.388**	.394**	.387**	.386**
with problem													
emotions													
encouragement	.350**	.262**	.207*	.411**	.227*	.175	.367**	.290**	.420**	.528**	.568**	.306**	.317**
of positive													
emotions													

TABLE 2
Table showing predictors of Factors of Positive Health from Dimensions of functioning of emotion by stepwise multiple regression

variable	contributor	contribution	% of contribution	F-value
Psychological well being	Negative emotion	negative	17%	20.165
	Ability to cope with problem emotion	Positive	7%	15.983
	Ability to function with emotions	Positive	5%	13.633
	Encouragement of positive emotions	Positive	3%	12.025
Hope	Encouragement of positive emotions	Positive	32%	46.689
	Positive emotions	Positive	8%	33.346
	Adequate expression and control of emotions	Negative	4%	25.510
Self-esteem	Ability to cope with problem emotion	Positive	14%	17.198
	Negative emotion	Negative	4%	11.319
Happiness	Negative emotion	Negative	15%	17.375
	Ability to cope with problem emotion	Positive	8%	14.803
	Positive emotion	Positive	4%	11.808
Satisfaction with life	Negative emotion	Positive	8%	9.023
	Ability to cope with problem emotion	Negative	5%	7.522

The results can be explained as following:

Correlational Analysis

Correlations were computed to find out the relationship between dimensions of functioning of emotion and factors of positive health.

Positive emotions and factors of positive health: There is significant correlation between positive emotions and autonomy ($r = .30, p < 0.01$), positive emotions and environmental mastery ($r = .29, p < 0.01$), positive emotions and positive relation with others ($r = .36, p < 0.01$), positive emotions and purpose in life ($r = .36, p < 0.01$), positive emotions and self acceptance ($r = .31, p < 0.01$), positive emotions and psychological well being ($r = .40, p < 0.01$), positive emotions and satisfaction with life ($r = .21, p < 0.05$), positive emotions and agency ($r = .43, p < 0.01$), positive emotions and pathway ($r = .39, p < 0.01$), positive emotions and hope ($r = .46, p < 0.01$), positive emotions and happiness ($r = .38, p < 0.01$), positive emotions and self esteem ($r = .30, p < 0.01$). Though the correlation is low but is positive and significant. Thus it indicates that positive emotions plays very important role in our life. Some of the psychologists have said that positive emotions are part of the well-being, happiness and satisfaction. Fierro (2006) found that Individuals are in a state of psychological well-being if they have a high degree of satisfaction with themselves, if their mood is good (positive affect), and if they only occasionally experience unpleasant emotions such as sadness, anger, and inhibitions (negative affect). Diener, Lucas and Scollon (2006) investigated that positive affect tends to decrease over the life span while life satisfaction tends to increase.

Negative emotions and factors of positive health: There is significant correlation between negative emotions and autonomy ($r = -.36, p < 0.01$), negative emotions and environmental mastery ($r = -.30, p < 0.01$), negative emotions and personal growth ($r = -.20, p < 0.05$), negative emotions and positive relation with others ($r = -.39, p < 0.01$), negative emotions and purpose in life ($r = -.28, p < 0.01$), negative emotions and self acceptance ($r = -.30, p < 0.01$), negative emotions and psychological well being ($r = -.41, p < 0.01$), negative emotions and agency ($r = -.26, p < 0.01$), negative emotions and pathway ($r = -.33, p < 0.01$), negative emotions and hope ($r = -.34, p < 0.01$), negative emotions and happiness ($r = -.39, p < 0.01$), negative emotions and self esteem ($r = -.30, p < 0.01$). Though the correlation is low but is negative and significant. Thus, it indicates that negative emotions also play very important in our life. They prepare us for the negative outcomes of life. Watson and Clark, (1984); DeNeve and Cooper, (1998); Brown and Marshall, (2011) found that close associations between positive and negative emotion and self-esteem

Emotion regulation and factors of positive health: There is significant correlation between reappraisal and positive relation with others ($r = .26, p < 0.01$), reappraisal and self acceptance ($r = .21, p < 0.05$), reappraisal and psychological well being ($r = .22, p < 0.05$), reappraisal and pathway ($r = .30, p < 0.01$), reappraisal

and hope ($r=.23$, $p<0.05$), reappraisal and happiness ($r=.24$, $p<0.05$), suppression and purpose in life ($r=-.21$, $p<0.05$). Though the correlation is low but is positive and significant except with suppression. Haga, Kraft & Corby (2009) investigated the use of cognitive reappraisal and expressive suppression and how these strategies related to measures of well-being (affect, life satisfaction, and depressed mood) in university students in Norway, Australia, and the United States. Use of emotion regulation strategies predicted well-being outcomes. Increased use of reappraisal predicted increased levels of positive well-being outcomes, while increased use of expressive suppression predicted increased levels of negative well-being outcomes. Well-being improved emotion regulation ability through a broaden-and-build mechanism (Fredrickson, 1998). Happy individuals with a broad mindset were exposed to more novel information about how to regulate emotions, and also more readily accept that information. In turn, their abilities to regulate emotions were improved.

Emotion competence and factors of positive health: There is significant correlation between adequate expression and control of emotions and personal growth ($r=.21$, $p<0.05$), adequate expression and control of emotions and purpose in life ($r=.22$, $p<0.05$), adequate expression and control of emotions and psychological well being ($r=.25$, $p<0.05$), adequate expression and control of emotions and self esteem ($r=.20$, $p<0.05$), ability to function with emotions and autonomy ($r=.20$, $p<0.05$), ability to cope with problem emotions and autonomy ($r=.47$, $p<0.01$), ability to cope with problem emotions and environmental mastery ($r=.25$, $p<0.05$), ability to cope with problem emotions and personal growth ($r=.28$, $p<0.01$), ability to cope with problem emotions and positive relation with others ($r=.33$, $p<0.01$), ability to cope with problem emotions and purpose in life ($r=.22$, $p<0.05$), ability to cope with problem emotions and psychological well being ($r=.38$, $p<0.01$), ability to cope with problem emotions and satisfaction with life ($r=.25$, $p<0.05$), ability to cope with problem emotions and agency ($r=.29$, $p<0.01$), ability to cope with problem emotions and pathway ($r=.39$, $p<0.01$), ability to cope with problem emotions and hope ($r=.39$, $p<0.01$), ability to cope with problem emotions and happiness ($r=.39$, $p<0.01$), ability to cope with problem emotions and self esteem ($r=.39$, $p<0.01$), encouragement of positive emotion and autonomy ($r=.35$, $p<0.01$), encouragement of positive emotion and environmental mastery ($r=.26$, $p<0.01$), encouragement of positive emotion and personal growth ($r=.20$, $p<0.05$), encouragement of positive emotion and positive relation with others ($r=.41$, $p<0.01$), encouragement of positive emotion and purpose in life ($r=.23$, $p<0.05$), encouragement of positive emotion and psychological well being ($r=.37$, $p<0.01$), encouragement of positive emotion and satisfaction with life ($r=.29$, $p<0.01$), encouragement of positive emotion and agency ($r=.42$, $p<0.01$), encouragement of positive emotion and pathway ($r=.53$, $p<0.01$), encouragement of positive emotion and hope ($r=.57$, $p<0.01$).

encouragement of positive emotion and happiness ($r=.31$, $p<0.01$), encouragement of positive emotion and self esteem ($r=.32$, $p<0.01$). Nelis, Kotsou, Quoidbach, Hansenne, Weytens, Dupuis and Mikolajczak (2011) found that by developing emotional competence, there are positive changes in psychological well-being, subjective health, quality of social relationships, and employability.

Multiple Regression Analysis

Table 2 shows the stepwise multiple regression analysis of the predictors of factors of positive health from the dimensions of functioning of emotions.

Psychological well being: Table 2 shows that negative emotions plays very important role in predicting psychological well being (about 17%) but their contribution is negative means if negative emotions decreases then they will increase psychological well being. Ability to cope with problem emotion (7%), Ability to function with emotions (5%), Encouragement of positive emotions (3%) also contribute in predicting psychological well being and their contribution is positive.

Hope: Encouragement of positive emotions (32%) plays very important role in predicting hope and its contribution is positive. It means that as positive emotions increases hope also increases. Positive emotions (8%) and adequate expression and control of emotions (4%) also predict hope.

Self-esteem: Ability to cope with problem emotion (14%) plays very important role in predicting self esteem. Negative emotions (4%) negatively predict hope.

Happiness: Negative emotions (15%) predict happiness but their contribution is negative. Ability to cope with problem emotion (8%) and positive emotion (4%) also predict happiness.

Satisfaction with life: Negative emotions (8%) plays crucial role in predicting satisfaction with life.

The past few decades have shown progress of research in the area of studying the relationship of emotions and positive health. But the number is less. On the basis of the research we can say that there is a strong relationship between the factors of positive health and the dimensions of positive health among adults. It shows that proper functioning of positive and negative emotions, their regulation and competence enhances well being, satisfaction with life, happiness, hope and self esteem.

REFERENCES

- Argyle, M., Martin, M., & Lu, L. (1995). Testing for stress and happiness: The role of social and cognitive factors. In C. D. Spielberger and I. G. Sarason (Eds.), *Stress and Emotion*. Washington, DC: Taylor and Francis, 15, 173-187.
- Bhandari, V. (2005). *A study of disruptive behavior in children of rural and urban setting*. Unpublished Ph.D. thesis. Department of Psychology, Kumaun University, Nainital.

- Brown, J. D., Marshall, M. A. (2011). Self-Esteem and Emotion: Some Thoughts about Feelings. *Society for Personality and Social Psychology*, 37(11), 575-584.
- Diener, E., Emmons, R.A., Larson, R.J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75.
- Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revisiting the adaptation theory of well-being. *American Psychologist*, 61, 305-314.
- Dwivedi, V. (2001). Impact of family climate and school climate on academic stress and stress management in adolescents: A study of open and closed culture. Unpublished Ph.D. Thesis. Department of Psychology, Kumaun University, Nainital.
- Fierro, A. (2006). Emotional intelligence, does associate to happiness? A province outline. *Ansiedad y Estrés*, 12(2-3), 241-249.
- Fredrickson, B. L. (1998). What good are encouragement of positive emotions? *Review of General Psychology*, 3, 300-319.
- Garrety, K., Badham, R., Morrigan, V., Rifkin, & Zanko, M. (2003). The use of personality typing in organizational change: Discourse, emotions and the reflexive subject. *Human Relations*, 56(2), 211-235.
- Gross, J.J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology*, 39, 281-291.
- Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.
- Haga, S. M., Kraft, P., & Corby, E.K. (2009). Emotion regulation: Antecedents and well-being outcomes of cognitive reappraisal and expressive suppression in cross-cultural samples. *Journal of Happiness Studies*, 10, 271-291.
- Jahoda, M. (1958). *Current concepts of mental health*. New York: basic Books.
- Joshi, U. (2006). *Climate variation, disruptive behavior and attributional style among children as a function of age, sex and residential local*, Unpublished Ph.D. Thesis. Department of Psychology, Kumaun University, Nainital.
- Leary, M.R. (1999a). Making sense of self-esteem. *Current directions in Psychological Science*, 8, 32-35.
- Leary, M.R. (1999b). The social and psychological importance of self-esteem. In R.M. Kowalski & M.R. Leary (Eds.), *The social psychology of emotional and behavioural problems* (pp. 197-221). Washington: American Psychological Association.
- Lyubomirsky, S., & Lepper, H. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, 46, 137-155.
- Maslow, A. (1968). *Towards a psychology of being*. New York: Van Nostrand.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (2000). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27, 267-298.
- Mohan, K. K. (2001). Spirituality and well-being: An overview. Cornelissen, Matthijs (Eds.) *Consciousness and its transformation*, Pondicherry: SAICE.
- Myers, D. G. & Diener (Ed.) (1995). Who is happy? *Psychological Science*, 6, 10-19.
- Nelis, D., Kotsou, I., Quoidbach, J., Hansenne, M., Weytens, F., Dupuis, P., & Mikolajczak, M. (2011). Increasing emotional competence improves psychological and physical well-being, social relationships, and employability. *Emotion*, 11(2), 354-366. doi: 10.1037/a0021554.

- Roberts, R. D., Zeidner, M., & Matthews, G. (2001). Does emotional intelligence meet traditional standards for an intelligence? Some new data and conclusions. *Emotion*, 1, 196-231.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press
- Russell, B. (1958). *The conquest of happiness*. New York: Liveright.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic wellbeing. *Annual Review of Psychology*, 52, 141-166.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1081.
- Saarni, C. (1990). Emotional competence: How emotions and relationships become integrated. In R.A. Thompson (eds.), *Socio-emotional Development at Nebraska Symposium on Motivation*, 19988 (pp. 115-182), Lincoln: University of Nebraska Press.
- Saarni, C. (1999). *The Development of Emotional Competence*. New York: Guilford Press.
- Sharma and Bharadwaj (1995). *Manual for the Emotional Competencies Scale*, Agra: Agra Psychological Research Cell.
- Snyder, C. R. (2002). hope theory: Rainbows in the mind. *Psychological Inquiry*, 13(4), 249-275.
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S.T., Yoshinou, L., Gibb, J., Langelle, C., & Harnay, P. (1991). The will and the ways: Development and validation of an individual differences measure of hope. *Journal of Personality and Social Psychology*, 60, 570-585.
- Watson, D., Clark, L. A., and Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 6; 1063-1070.
- Wong, C.-S. & Law, K. S. 2002. The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly*, 13, 243-274.
- Yadava, A., Hooda, D., Sharma, N. R. (2012). *Biopsychosocial Issues in Positive Health*. New Delhi: Global Vision Publishing House.

IM

Key

rese

*

**

IMPACT OF SELF-TALK AND PERSONALITY ON EMOTIONAL INTELLIGENCE

Meenakshi Chauhan* and P.K. Rai**

ABSTRACT

This paper aims at to study the impact of self-talk, and different traits of personality on empathy. Self-talk is a way of describing all the things we say to ourselves all day long as we confront obstacles, make decisions, and resolve problems. Self-talk of a person determines his self-esteem in a positive or negative way which in turn effects his behaviour. A trait is a temporally stable, cross-situational individual difference. Emotional intelligence is the ability of an individual to appropriately and successfully respond to a vast variety of emotional stimuli being elicited from the inner self and immediate environment. To measure self-talk, self-talk inventory, for the traits of personality, big-five personality test, and for emotional intelligence, the assessing emotions scale were used. This study was conducted on the students of post graduate classes of different faculties of Dr. H.S. Gour University. Multiple regression was done by using SPSS - 17. In the correlation matrix positive conscientiousness and agreeableness are significantly correlated with emotional intelligence. All the predictor variables together are responsible for only 2% of the variance in emotional-intelligence. Conscientiousness and agreeableness are the strongest predictors among all.

Keywords: Self-Talk, Personality Traits Emotional-Intelligence.

INTRODUCTION

Since 1990, Peter Salovey and John D. Mayer have been the leading researchers on emotional intelligence. In their influential article "Emotional

* Research Scholar, Dept. of Psychology, Dr. H. S. G. University, Sagar, (M. P.).
Mob: 9806980122, email: meenakshi.mei28@yahoo.com

** Prof. of Psychology, Dept. of Psychology, Dr. H. S. G. University, Sagar, (M. P.).
Phone: (O) 07582-264310, 265025, (M) 9302910289 Email: prof.pkrai@gmail.com
pkrai@dhsgsu.ac.in

Intelligence," they defined emotional intelligence as, "the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (1990).

Salovey and Mayer proposed a model that identified four different factors of emotional intelligence: the perception of emotion, the ability to reason using emotions, the ability to understand emotion and the ability to manage emotions.

1. **Perceiving Emotions:** The first step in understanding emotions is to accurately perceive them. In many cases, this might involve understanding nonverbal signals such as body language and facial expressions.
2. **Reasoning with Emotions:** The next step involves using emotions to promote thinking and cognitive activity. Emotions help prioritize what a person pay attention and react to; a person responds emotionally to things that garner his attention.
3. **Understanding Emotions:** The emotions that a person perceives can carry a wide variety of meanings. If someone is expressing angry emotions, the observer must interpret the cause of their anger and what it might mean. For example, if the boss is acting angry, it might mean that he is dissatisfied with the work; or it could be because he got a speeding ticket on his way to work that morning or that he's been fighting with his wife.
4. **Managing Emotions:** The ability to manage emotions effectively is a key part of emotional intelligence. Regulating emotions, responding appropriately and responding to the emotions of others are all important aspects of emotional management.

According to Salovey and Mayer, the four branches of their model are "arranged from more basic psychological processes to higher, more psychologically integrated processes. For example, the lowest level branch concerns the (relatively) simple abilities of perceiving and expressing emotion. In contrast, the highest level branch concerns the conscious, reflective regulation of emotion (1997).

The good news about emotional intelligence is that, unlike IQ, it can be improved throughout life. In a serendipitous fashion, life offers innumerable chances to tone a person's emotional competence. In the normal course of a lifetime, EI tends to increase as you learn to be more aware of your moods, to effectively handle distressing emotions, to listen and empathise. In short, as a person become more mature (Singh, D. 2003). Men and women are equal in their ability to increase emotional intelligence. While women tend to be stronger in competencies based on empathy and social skills, men do better in those based on self-regulation.

Self-talk is defined as cognitive products that reflect what people tell themselves. According to Pascal "Man is an intimate dialogue" (Marina, 2005). Within a person, he transmits information and orders and also ask questions. In most cases, thoughts take the form of internal self-talk to oneself, although cognitions also take such forms as the imagination, affective information and tacit knowledge (Schwartz, 1997).

Joseph (2009) identifies "self-talk as being the things a person says about themselves when faced with problems, difficulties or challenges". Self-Talk or Inner speech is a characteristic of human kind (Fields, 2002). Thoughts in the form of inner conversation deluge a person's mind and cognitive theorists have long emphasized the link between what a person says to himself and how he behaves, suggesting that a person's thinking can affect emotional and behavioural outcomes (Ellis, 1994; Meichenbaum, 1977). Meichenbaum (1977) viewed self-statements as indices of individual's beliefs which may play a mediational role in behavioural performance.

Self-talk is a way of describing all the things one says to himself all day long as he confronts obstacles, makes decisions, and resolves problems. Self-talk is not "talking to yourself" in a literal sense, although it sometimes does involve talking out loud (depending on the person). There is a myth, that a person talk to himself, it is a sign of "craziness" or mental illness. That idea stems from the "voices" or auditory hallucinations experienced in severe forms of mental illness, such as schizophrenia. When a person hears voices, he/she thinks it is someone else talking to them. The self-talk described here is not like that at all. Everyone is engaged in self-talk. Usually, it is part of thinking process, or "stream of consciousness."

Researchers like Martin Seligman have been studying optimists and pessimists for years, and they have found that an optimistic world view carries certain advantages. Language may be the most powerful tool ever invented to influence behaviour. Language directed inward, or "self-talk," is especially important in performance situations. Sport psychologists describe self-talk as thinking, or making internal or external statements. This dialogue with oneself provides a means of identifying and solving problems by making perceptions and beliefs conscious.

Available research indicates that self-talk can improve attentional control and create positive expectancies. Positive self-talk has also been associated with more successful competitive outcomes whereas negative self-talk is associated with losing and poorer attentional control. It is also helpful in arousal management, competitive pressure management, anger management, elimination of fear and choking, and development of the killer instinct.

According to Brain Traicy (2011), the most powerful influence on a person's attitude and personality is what he say to himself, and believe. It is not what

happens to him, but how he respond internally to what happens to him, that determines his thoughts and feelings and ultimately, his actions. By controlling the inner dialogue, or self-talk, one can begin to assert control over every other dimension of his life.

One's self-talk, words that he use to describe what is happening to him and to discuss how he feels about external events, and determines the quality and tone of his emotional life. When he sees things positively and constructively and look for the good in each situation and each person, he has a tendency to remain naturally positive and optimistic. Optimists develop the habit of talking to themselves in constructive ways. Whenever they experience an adversity, they immediately describe it to themselves in such a way that it loses its ability to trigger negative emotions and feelings of helplessness.

According to Walt Schafer (2004), Negative self-talk is *perpetuates avoidance*. Negative self-talk prevents us from solving problems, and can contribute to a variety of psychological problems, including depression. One tells himself that a situation such as the freeway is dangerous and so he avoid it. By continuing to avoid it, he reinforce the thought that it's dangerous. A person may even project images of catastrophe around the prospect of confronting the situation. In short, anxious self-talk leads to avoidance, avoidance begets further anxious self-talk, and around and around the cycle goes.

Trait is a quality or characteristics mode of behaviour which is consistently seen in an individual's behaviour over a long period of time. Cheerful man is consistently cheerful over a long period of time in varied situations. A trait may therefore be defined as a particular quality of behaviour which characterizes the individual in a wide range of his activities and is fairly consistent over a period of time. A trait of personality means such a distinctive character of a person's thoughts, feelings and actions as market him off from other persons. The cluster of characteristics is a trait.

Trait psychology considers personality traits as the primary point of focus in defining personality and views human nature in terms of individual differences. As in any of the theoretical orientations, there are numerous theories and trait systems within trait psychology which attempt to explain personality. *The Big five* model provides an empirical generalization of the co-variation of personality traits.

Depape et al (2006) studied Self-Talk and Emotional Intelligence in university students. The results indicated that year of study and self-talk were significant predictors of emotional intelligence and were associated with emotional intelligence in a positive direction. Contrary to expectation, gender was not a significant predictor.

Other theorists and researchers (Neubauer & Freudenthaler, 2005; Petrides & Furnham, 2001, 2003) have argued that emotional intelligence can be usefully

conceptualised as typical (or trait) functioning. A trait approach to assessing emotional intelligence draws on self or other reports to gather information regarding the display of emotional intelligence characteristics in daily life. Even though some literature presents ability and trait conceptualisations of emotional intelligence as mutually exclusive alternatives (e.g., Mayer, Salovey & Caruso., 2000), we believe that both are important and complementary dimensions of adaptive emotional functioning.

Numerous studies have explored how scores on the Assessing Emotions Scale are associated with outcomes one might expect to be related to emotional intelligence. Such outcomes are found in various life realms including mental health, employment, and academic pursuits. Examples of early findings include that Assessing Emotions Scale scores related to more optimism, greater impulse control, lack of depressed affect (Schutte et al., 1998), more empathic perspective taking, greater self-monitoring in social situations, more closeness and warmth in relationships, and greater marital satisfaction (Schutte et al., 2001). Further, scale scores predicted better mood repair after a negative mood induction (Schutte, Malouff, Simunek, McKenley & Hollander, 2002). From the above discussion, it is obvious that there is strong association between self-talk and emotional intelligence. But still there are lots of potential to study the association between personality traits and emotional intelligence.

Objective

The main objective is to find out the power of prediction of self-talk and personality traits on emotional intelligence.

Hypotheses

- There will be positive correlation between positive self-talk and emotional intelligence.
- There will be negative correlation between negative self-talk and emotional intelligence.
- There will be positive correlation between personality traits (extroversion, openness, agreeableness and conscientiousness) and emotional intelligence.
- There will be negative correlation between neuroticism and emotional intelligence.

METHODOLOGY

Sample

A sample of 262 Subjects was drawn from students of P.G. courses from different Colleges/ University Teaching Departments. The age group was taken between twenty two to thirty, as it is considered that mostly students in this age group pursues P.G. courses.

Sampling

Convenience sampling, a type of non-probability sampling method is used in the study. A convenience sample is a matter of taking what a researcher can get. Volunteers would constitute a convenience sample.

Study Design

This study aims at to predict the co-relational relationship between the given variables. Hence different types of self-talk (negative and positive) and different traits of personality as measured by NEO-FFI were used as predictor variables and Self-Esteem was taken as outcome variables. Here variables were measured simultaneously and none of them were manipulated.

Statistical Techniques Used

In this study, multiple regression was performed on SPSS-17. For this study, Backward method was adopted for linear multiple regression. In Backward selection, SPSS enters all the predictor variables into the model. The weakest predictor variable is then removed and the regression re-calculated. If this significantly weakens the model then the predictor variable is re-entered - otherwise it is deleted. This procedure is then repeated until only useful predictor variables remain in the model. In multiple regression there is no direct manipulation of the variables but instead just measure the natural occurring levels of the variables and see if this helps in predicting the score on the D.V.

Measures

- *Self-Talk Inventory*: It was constructed by Ester Calvete and Olga Cardenoso (University of Deusto) in 2002. This inventory includes two different scales: Negative self-talk scale and Positive self-talk scale. It consists of ten imaginary situations using a 4-point response formatted scale (1 = not very probable, 2 = somewhat probable, 3 = quite probable, 4 = very probable).
- *The Assessing Emotions Scale*: was developed by Nicola S. Schutte, John M. Malouff and Navjot Bhullar. It is a 33-item self-report inventory focusing on typical emotional intelligence. Respondents rate themselves on the items using a five-point scale. Respondents require on average five minutes to complete the scale. Total scale scores are calculated by reverse coding items 5, 28 and 33, and then summing all items. Scores can range from 33 to 165, with higher scores indicating more characteristic emotional intelligence.
- *NEO-PI-R*: This test was developed by Paul T. Costa and Robert R. McCrae in 1985. It is a concise measure of the five major dimensions, or domains, of personality and some of the more important traits or facets that define each domain. Together, the five domain scales

(extraversion, neuroticism, agreeableness, openness and conscientiousness) and thirty facet scales of the test allow a comprehensive assessment of adult personality.

RESULTS AND DISCUSSION

In the table 1, mean, S. D. and correlational matrix is presented. Correlational matrix shows significant relationship in bold numbers between the variables. It can be observed that positive self-talk is significantly correlated with empathy (i.e. $r = .156$, $p < .05$) and neuroticism (Neuro.) is negatively correlated with empathy (i.e. $r = -.075$, $p < .00$). Agreeableness (Agree) is significantly correlated with empathy (i.e. $r = .222$, $p < .00$) while remaining three personality traits i.e. Extraversion (Extro.), Openness (Open.) and Conscientiousness (Cons.) are not showing any significant relationship with empathy. Besides, the table is showing correlation between Self-Talk and Personality traits. Except neuroticism, self-talk is showing correlation with all other traits of personality.

TABLE 1

Mean, S.D. and Inter-Correlational matrix
(Pearson Correlation) of all the variables.

	Mean	S. D.	S-t pos.	Neuro.	Extro.	Open.	Agree.	Cons.	E. I.
1. S-t neg.	44.40	14.42	-.045	-.049	-.092	-.166**	-.222**	.006	-.067
2. S-t pos.	70.43	14.44		-.068	.123*	-.177**	.048	.140*	.093
3. Neuro.	24.87	5.47			.172**	.039	-.137*	-.222**	-.060
4. Extro.	30.32	4.96				-.123*	.101	.023	.025
5. Open.	26.20	4.79					.005	-.115	.042
6. Agree.	26.83	5.26						.274**	.143*
7. Cons.	33.35	5.76							.163**
8. E. I.	128.46	13.78							

* $p < .05$. ** $p < .001$.

Scatter plots were also drawn between all the possible combinations of P.Vs. and O.Vs. The red line in the graphs shows regression line or the line of fit. The partial dotted line represents the non-linear regression line, a bend in regression line. It's uncommon in behavioural science but here it's used to make better understanding and prediction between the variables.

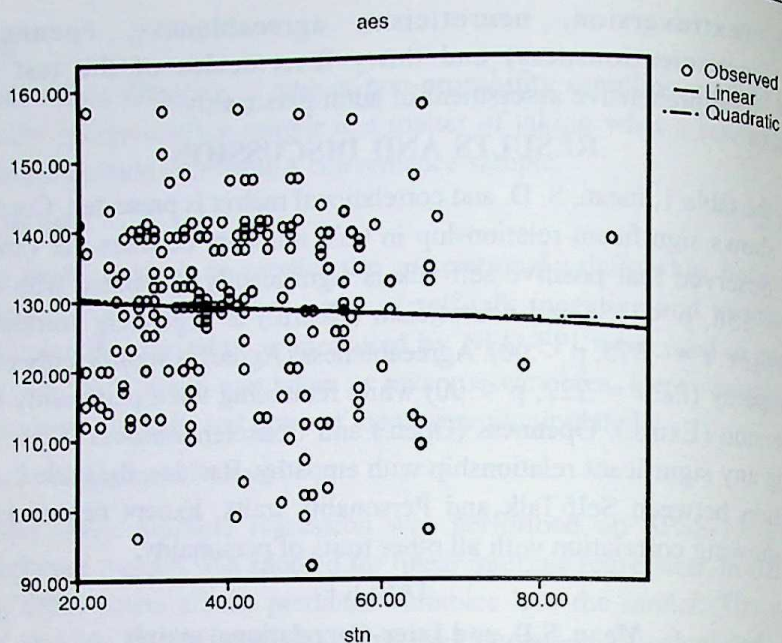


Figure 1: Scatterplot between EER and Negative Self-Talk.

In the graph 1, the line has mild negative slope and the partial dotted line is covered by regression line which denies any possibility of non-linear relationship. The scores are scattered in the left side of the graph pointing towards weak relationship. Outliers are also present.

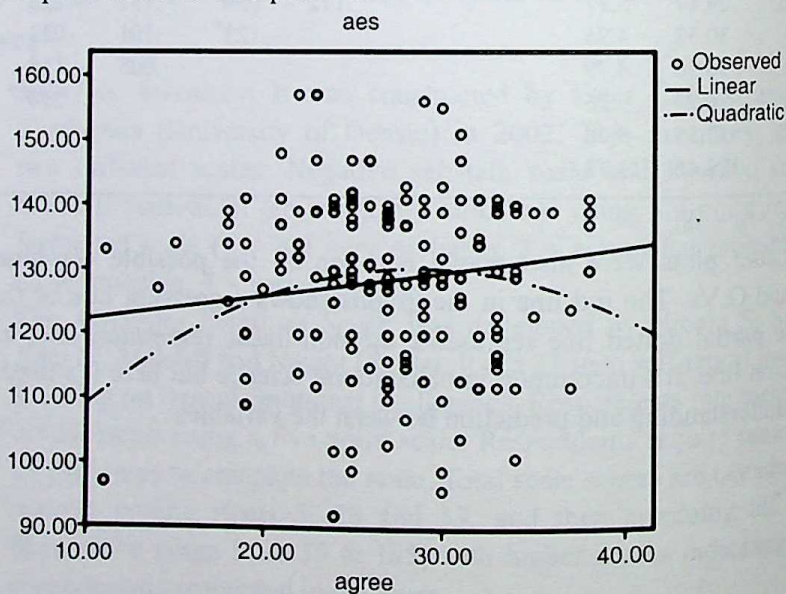


Figure 2: Scatterplot between Emotional Expression and Regulation and Agreeableness

In the graph 2, there may be a linear relationship between agreeableness and Emotional Expression and Regulation. Here the regression line has mild slope

moving upward showing a positive trend. The partial dotted line showing possibility of non-linear relationship. Scattered scores are showing weak relationship. Some outliers are also present.

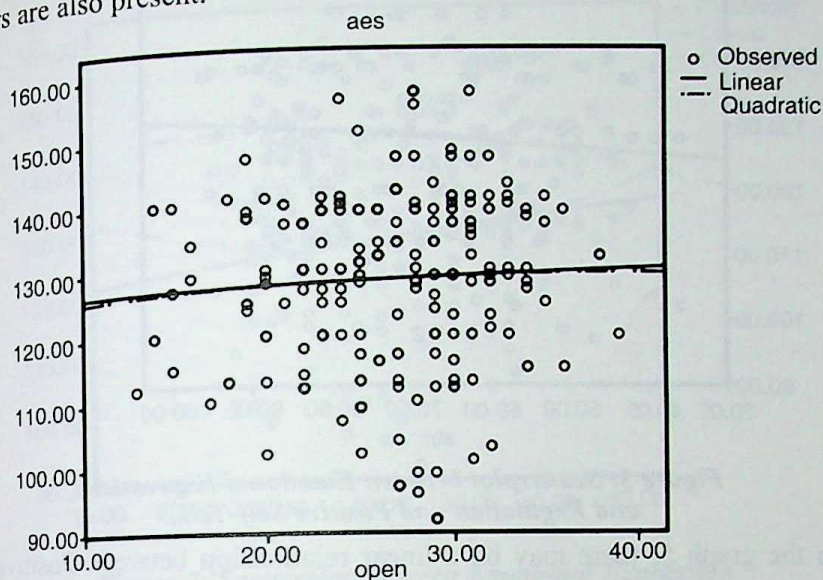


Figure 3: Scatterplot between Emotional Expression and Regulation and Openness.

The graph 3, is showing almost a straight line showing no relationship between the variables. The scores are scattered all over the graph showing weak relationship.

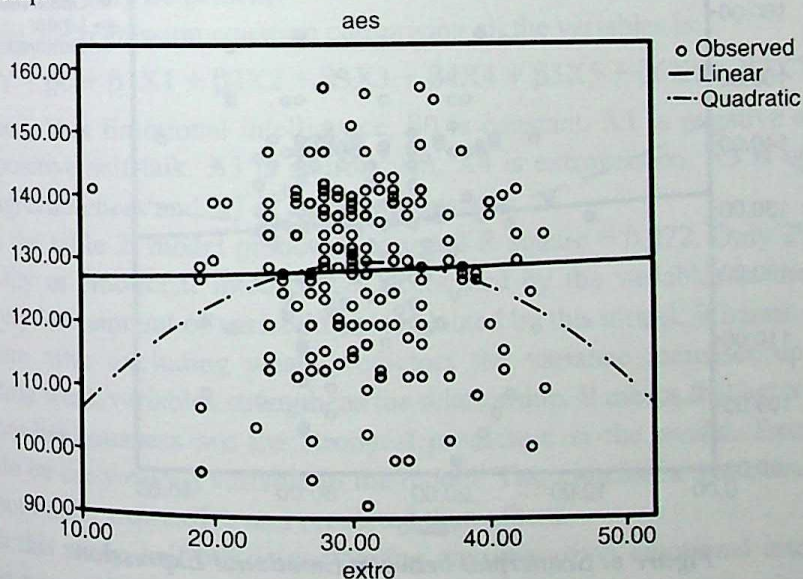


Figure 4: Scatterplot between Emotional Expression and Regulation and Extraversion.

The graph 4 is showing a non-linear trend as the red line is straight and the partial dotted line has a deep bend.

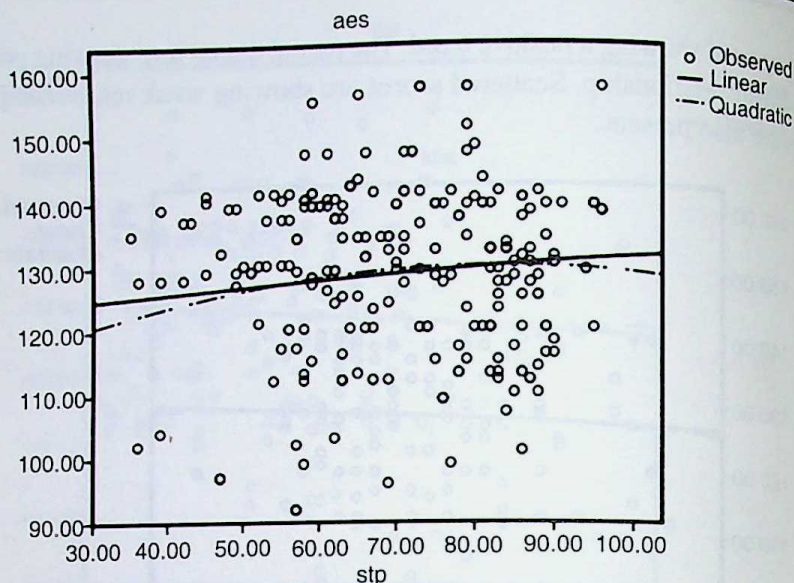


Figure 5: Scatterplot between Emotional Expression and Regulation and Positive Self-Talk.

In the graph 5, there may be a linear relationship between Positive Self-Talk and Emotional Expression and Regulation. There is no bend in the partial dotted line. The mild slope of red line points towards a positive trend between Positive Self-Talk and Emotional Health. The scattered scores shows weak relationship and some outliers are also present.

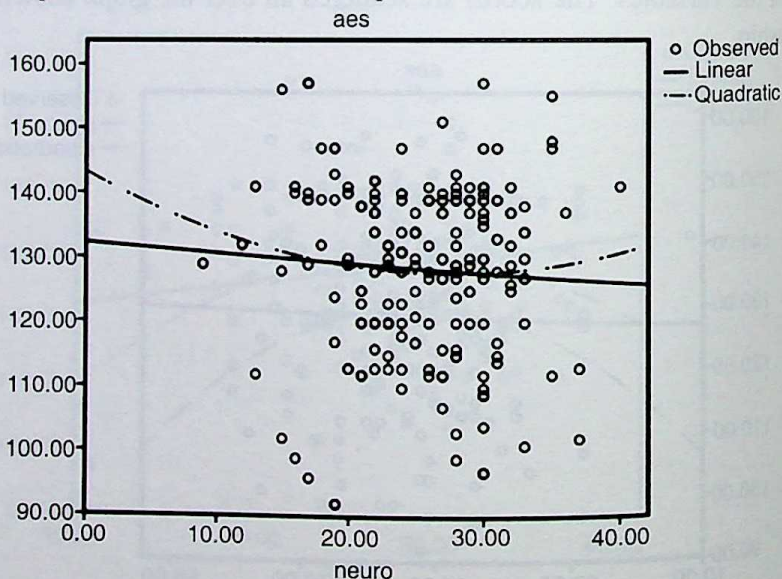


Figure 6: Scatterplot between Emotional Expression and Regulation and Neuroticism.

In the graph 6, there may be a linear relationship between Neuroticism and Emotional Expression and Regulation. The mild downward slope is pointing

negative trend between the variables. Scattered scores are showing weak relationship. May be some outliers are also present.

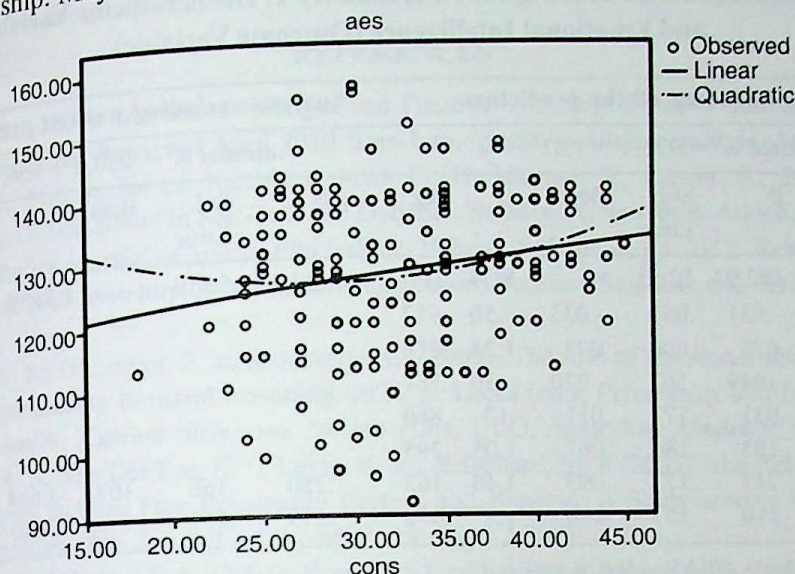


Figure 7: Scatterplot between Emotional Expression and Regulation and Conscientiousness.

In the graph 7, there may be a linear relationship between Conscientiousness and Emotional Expression and Regulation. The upward slope presents a positive trend between the variables. Scattered scores are showing weak relationship. Some outliers, may be present.

Here, the regression equation comprising all the variables is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7.$$

Here, Y is Emotional intelligence, β_0 is constant, X1 is negative self-talk, X2 is positive self-talk, X3 is neuroticism, X4 is extroversion, X5 is openness, X6 is agreeableness and X7 is conscientiousness.

In the table 2, model produced adjusted R square = 0.022. Only 2% of the variability in emotional intelligences accounted by the variables in the model. Here very less amount of variability is explained by this model. Whereas adjusted R square after excluding weak predictors the variance increases up to 3%. Excluding weak variables strengthens the relationship. It means that agreeableness and conscientiousness are the strongest predictors in the model. Extraversion found to be the weakest variable in the model. This concludes that extraverts are not emotionally expressive and regulated than others.

In this study, self-talk is not having any impact on emotional intelligence. Among personality traits agreeableness and conscientiousness is having impact. They may have better expression and regulation of emotion than others. Also, the F value was not significant when all variables were included.

TABLE 2:

Summary of Regression Analysis Testing the Association between Self-Talk Subscales and Big Five Personality Traits (Predictor Variables) and Emotional Intelligence (Outcome Variable).

Analysis including all the predictors					Analysis excluding weakest predictors					
Adjusted R ² = .022, F = 1.83 ^{NS}					Adjusted R ² = .030, F = 4.98**					
	B	Std. Error	Beta	t	Sig.	B	Std. Error	Beta	t	Sig.
(Constant)	102.93	12.33	—	8.34	.000	110.30	5.810	—	18.98	.000
S-t neg.	-.031	.061	-.033	-.50	.612	—	—	—	—	—
S-t pos.	.075	.060	.078	1.24	.216	—	—	—	—	—
Neuro.	-.049	.162	-.020	-.30	.761	—	—	—	—	—
Extro.	.031	.177	.011	.17	.860	—	—	—	—	—
-Open.	.193	.184	.067	1.05	.295	—	—	—	—	—
Agree.	.243	.173	.093	1.40	.162	.280	.166	.107	1.684	.09
Cons.	.310	.157	.130	1.97	.050	.319	.152	.134	2.107	.03

* $p < .05$. ** $p < .00$. NS = Not Significant.

It seems that there is no impact of negative or positive thoughts on emotional intelligence. A person is equally able to regulate and express his emotions in an adversity situation whether he is having negative or positive affirmations. Conscientious people work towards goals in a disciplined, dependable fashion. He proceeds in a linear, sequential manner, with a strong will to achieve. He typically consolidates his time, energy and resources in pursuit of his goals.

Negative or positive self-talk is not showing any significant relationship with emotional intelligence. Previous researches quoted that self-talk impacts performance, motivation, emotions and their regulations. But the findings of the present study are not in consonance with previous studies. In this sample self-talk is acting differently. Also, it is a matter of future research that how people cognise emotional intelligence in Indian culture.

Findings

- No significant relationship has been found between either type of self-talk and emotional intelligence.
- Significant positive relationship has been found between personality traits (conscientiousness and agreeableness) and emotional intelligence.
- Openness, Neuroticism and Extraversion seems to be the weakest variables in predicting the emotional intelligence.

Limitations

- Convenience sampling may have caused selection bias. Systematic random sampling may be used for recruiting study samples in future researches to avoid any selection bias.

Vol. 9, No. 1, September, 2014

- In addition to the quantitative method, in-depth qualitative research may also be used to have more precise and informative answers to the research question.

REFERENCES

- Abbott, D. (2008). Maximum Strength and Positive Thinking: Positive Self-Talk for a Positive Life. Retrieved April 2010 from <http://positiveselftalk.com/index.htm>
- Araiki, K., Mintah, Joseph K., Mack, Mick G., Huddleston, S., Larson, L., & Jacobs, Kelly. (2006). Belief in Self-Talk and Dynamic Balance Performance. *Athletic Insight: The online journal of Sports Psychology*, Volume 8, Issue 4, pp. 1-12. Retrieved in March 2010 from <http://www.athleticinsight.com/Vol8Iss4/SelfTalkandPerformance.htm>
- Athota, V. S., O'Connor, P. J., & Jackson, C. (2009). The role of emotional intelligence and personality in moral reasoning. In R. E. Hicks (ed.), *Personality and individual differences: Current directions*. Bowen Hills, QLD, Australian Academic Press.
- Bakker, A. B., Van Der Zee, K. I., Levig, K. A., & Dollard, M. F. (2005). The Relationship between the Big Five Personality Factors and Burnout: A Study among Volunteer Counselors. *The Journal of Social Psychology*, 135(5) 1-19.
- Bono, J. E., & Judge, T. A. (2003). Core Self-Evaluations: A Review of the Trait and its Role in Job Satisfaction and Job Performance. *European Journal of Personality* 55-518. Retrieved Jan. 2012 from [www.timothy-judge.com/Bono % 20 and % 20 Judge % 20 EWOP % 20 pub](http://www.timothy-judge.com/Bono%20and%20Judge%20EWOP%20pub).
- Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin*, 29, 1147-1158.
- Brown, Y. F. (n.d.) The power of positive self-talk. Available at yvonnebrown.com/articles/the-power-of-positive-self-talk.
- Calvete, E., Estevez, A., Landin, C., Martinez, Y., Cardenoso, O., Villardon, L., & Viilla, A. (2005). Self-Talk and Affective Problems in college Students: Valance of thinking and Cognitive Content Specificity. *The Spanish Journal of Psychology*, Volume 8, No. 1, pp 56-67.
- Candland, Douglas K., Fell, Joseph P., Keen, Ernest, Leshner, Alan I., Plutchik, Robert, & Tappy, Roger M. (1977). *Emotion*. Wadsworth Publishing Company, (247 - 250): California.
- Cherbosque, J., Gardenswartz, L., & Rowe, Anita. (2008). Emotional Intelligence and Diversity Series Self-Governance: Managing Your Emotions So They Don't Sabotage You. Retrieved Jan. 2012 from www.workforcediversitynetwork.com/.../Article_EmotionalIntelligen...
- Ciarrochi, J., Chan, A. Y. C., & Caputi, P. (2000). A critical evaluation of the emotional intelligence construct. *Personality and Individual Differences*, 28, 539-561.
- MacCann, C., Matthews, G., Zeidner, M., & Roberts, R. D. (2004). The assessment of emotional intelligence: On frameworks, fissures, and the future. In G. Geher (Ed.), *Measuring emotional intelligence: Common ground and controversy* (pp. 21-52). Hauppauge, NY: Nova Science.

- Matthews, G., Deary, Ian J., & Whiteman, Martha C. (2003). *Personality Traits* – 2nd edn. McGraw – Hill Kogakusha, Ltd., (96-100): Kogakusha. Available at catdir.loc.gov/catdir/samples/cam041/2003046259.pdf
- Morin, A. (2005). Possible links between self-awareness and inner speech: Theoretical background, underlying mechanisms, and empirical evidence. *Journal of Consciousness Studies*, 12(4-5), 115-134.
- Perez, J. C., Petrides, K.V., & Furnham, A. (2000). Measuring Trait Emotional Intelligence. Pp 123-143. Retrieved Jan. 2012 from [www.psychometriclab.com/...measuring%20trait%20ei%20\(chapter\)...](http://www.psychometriclab.com/...measuring%20trait%20ei%20(chapter)...)
- Petrides, K. V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behavior at school. *Personality and Individual Differences*, 36, 277-293.
- Schutte, N.S., Malouff, J.M., & Bhullar, N. (2009). The Assessing Emotions Scale. C. Stough, D. Saklofske & J. Parker (Eds.), *The Assessment of Emotional Intelligence*. New York: Springer Publishing, 119-135.)
- Singh, Dalip (2003). *Emotional Intelligence at work: A Professional Guide* (2nd ed.). Response Books (A division of Sage Publications India Pvt.).
- Van der Zee, K., Schakel, L., & Thijs, M. (2002). The relationship of emotional intelligence with academic intelligence and the big five. *European Journal of Personality*, 16, 103-125.
- Zellars, K. L., Perrewe, P. L., & Hochwarter, W. A. (2000). Burnout in health care: The role of the five factors of personality. *Journal of Applied Social Psychology*, 30(8), 1570-1598.

HEALTH LOCUS OF CONTROL AND COMPLIANCE WITH MEDICAL REGIMEN: A STUDY OF TYPE 2 DIABETES PATIENTS

Musaddiq Jahan*

ABSTRACT

The present study was conducted to examine the role of health locus of control and compliance to medical regimen in controlling and managing diabetes. Participants of the study were 200 diagnosed diabetic patients (Females=100, Males=100), out of which 100 had controlled diabetes and 100 had uncontrolled diabetes. Health Locus of control was measured by Wallston's HLC scale and Compliance behaviour was measured by using an 11 item four point likert type scale prepared for this purpose. The results indicated that those patients whose blood sugar level was under control, were significantly higher on internal health locus of control and were more compliant with medical regimen. Furthermore, females whose blood sugar level was under control, scored significantly higher than their male counterparts on compliance behaviour.

Keywords: Chronic health problem, Health locus, Health locus of control

INTRODUCTION

Diabetes is a chronic health problem that is increasing at every rapid speed and affecting millions of people all over the world. India is having the highest number of diabetes patients in the world and it is estimated that by year 2025, this population will be equal to the diabetes patients living in the entire world.

Diabetes is not only a disease of blood sugar but it also affects almost all bodily functions. Its management is in the hands of the patient and his family members. The patient has to follow day to day administration of his medication which can be extremely difficult, resulting in anxiety, guilt, anger, and depression.

* Associate Professor, Dept. of Psychology, Women's College, A.M.U. Aligarh
Email. musaddiq.jahan@gmail.com

Sometimes serious family discord can lead to non-compliance affecting the health of the patient. Even sometimes there can be complete negligence of the diabetic regimen.

The treatment approach for diabetes enacts a balancing act with medication, diet, and regular exercise. Diabetes patients can reduce their long term health risks by keeping their blood glucose levels within the normal range by carefully following prescribed treatment regimen®. Today treatments for diabetics allow patients to have a better control over their blood sugar than in the past but these new methods are still not perfect and many patients who have regimens that could provide better control over their blood glucose, do not adhere to them closely. Noncompliance with the treatment regimen is a major problem in managing diabetes. Years ago, review of studies on this issue found most people with diabetes tested their blood glucose level incorrectly, administered wrong doses of insulin and failed to follow the recommended diet carefully (Wing et al., 1985) and the situation is worsening continuously. Researchers have found that blood sugar control among type-2 diabetes decreased from 1988 to 2000 (Koro et al, 2004).

Noncompliance with medical recommendations tend to be low when the regimen is complex, must be followed for along time, requires change in the person's lifestyle, and is designed to prevent rather than cure illness. Treatment regimen for diabetes has all these characteristics. In addition, psychosocial factors in patients' lives are related to compliance. Two of these factors studied are social support and self-efficacy. A study found that diabetic patients' self-report of adherence to dietary, exercise and glucose testing aspects of their regimen is increased with perceived social support (Wilson et. al., 1986). Adherence was found to be associated with low HBA1c level (Hill Briggs et al, 2005). Their data suggested that specific medication taking behaviours are important to diabetes control and constitute logical targets for interventions.

Health locus of control has been the focus of study in many researches on metabolic control among both type- 1 and type- 2 diabetes. Internal health beliefs and a weak belief in chance and luck are found to be associated with better metabolic control in insulin dependent diabetes mellitus (Stemstorm et. al., 1998). Ohea & Erin (2005) advocated the role of HLOC beliefs in medical outcomes in low income individuals diagnosed with type-2 diabetes. Health beliefs have both direct and indirect effect on diabetes metabolic control through compliance (Brown and Hedges, 1994). Importance of adherence was shown in a study conducted by Hill-Briggs et. al., (2002), on type-2 diabetes patients to assess medication adherence. Adherence was associated with lower HbA1c (Hemoglobina1c), suggesting that specific medication taking behaviors are important to diabetes control.

Psychologists have long been interested in understanding the role of locus of control beliefs in a variety of health attitudes, behaviors and situations. The concept of Health Locus of Control (HLC) was first popularized in 1976 by

Wallston et. al., who recognized that there was difficulty in predicting health behaviour specifically from generalized expectancy measures such as Rotter's scale (1966). HLC has been related to whether individuals change their behaviour and the kind of communication style they require from health professionals. HLC is the degree to which individuals believe that their health is controlled by internal or external (chance and powerful others) factors.x

It is very important that patients play an active role in the management and taking care of their health. In this context the role of HLC beliefs seems to be important. Internal HLC has been found by many researchers to be associated with better metabolic control among insulin dependent diabetes mellitus (Stenstrom et. al., 1989). HLC is significant predictor of non-attendance of diabetic nutritional care clinics (Spikmans et al, 2003) and is meaningfully related to medical regimen adherence (O'hea et. al., 2005). It has been found to be a significant predictor of general health status of diabetic patients. Brown and Hedges (1994) studied the results of previous studies and designed a model to explain metabolic control in diabetes. Predictors to metabolic control that were selected were knowledge, health beliefs, and compliance or adherence. Findings indicated that health beliefs had direct and indirect effect on diabetes metabolic control through compliance. The study conducted by Hill-Briggs et.al., (2005) on adherence to diabetic medication suggested that specific medication taking behaviours are important to diabetic control and constitute logical targets for intervention.

In the present investigation an attempt is made to examine the HLC and compliance to medical regimen among controlled and uncontrolled type-2 diabetes patients.

METHOD

Sample

Sample of the present study comprised of 200 diagnosed patients of type-2 diabetes visiting the of J.N. Medical college, A.M.U., Aligarh. Out of these, 100 were males and 100 were female patients. Age of the patients ranged between 45 to 60 years. The criteria for selection of the participants was as follows: patients with a sugar level (fasting) d" 120 and below were considered as patients with controlled diabetes and those having sugar level (fasting) e" than 200 were considered as uncontrolled diabetes patients. Most of the patients belonged to middle class and lower middle class whose family monthly income ranged between Rs. 10000 to Rs. 25000. Many patients were illiterate also. The data were collected individually from the Endocrinology OPD.

Tools of the Study

The following scales were used.

- **Health Locus of Control Scale (HLC):** The multi-dimensional Health Locus of Control Scale developed by Wallston et. al., (1976) consists

of 18 items. The scale is composed of three 6-item subscales reflecting the degree to which individuals attribute health outcomes to internal control, powerful others, and chance. Each subscale measures an individual's tendency to believe that health outcomes are due mainly to one's own behaviour (IHLOC), powerful others such as medical professionals or family (PHLC), or to chance (CHLC).

- **Compliance Behaviour Questionnaire:** The questioner was specially designed to measure patient's compliance to medical prescriptions regarding medication, diet, exercise etc. It consists of 11 items which measure a person's adherence to medical regimen. Each item in the scale has to be answered on a 4-point rating scale ranging from 3 (always) to 0 (never). All the ratings on the scale are summed up to get a total score.

Procedure

The researcher visited the OPD of J.N. Medical college A.M.U., Aligarh. The permission for data collection was taken from Head of the department of Endocrinology. Then the patient who visited the researcher was made to sit comfortably in a relaxed manner. In the beginning good rapport was established with the patient. Then the investigator explained the objectives of the study and took the patient's consent prior to data collection and did not force anyone to participate in the study. After establishing rapport the patients were asked questions to get information on demographic variables. Illiterate patients were administered the questionnaire orally while those who were literate and agreed to fill the questionnaire themselves, were allowed to do so. Each respondent took about ten to fifteen minutes to answer the questionnaires.

RESULTS

The results of the present study are presented in the tables 1 through 4.

TABLE 1

Comparison of Controlled and Uncontrolled Diabetic patients on Health Locus of Control and Compliance to Medical Regimen

<i>HLC Dimensions</i>	<i>Groups</i>	<i>Mean</i>	<i>SD</i>	<i>t-value</i>
IHLC	Controlled	23.45	2.77	2.96*
	Uncontrolled	19.47	2.71	
CHLC	Controlled	15.34	2.87	.32
	Uncontrolled	15.66	2.80	
PHLC	Controlled	24.55	2.85	.38
	Uncontrolled	24.83	2.70	
Compliance	Controlled	24.56	3.89	3.96*
	Uncontrolled	20.36	3.44	

The values in table I show that controlled and uncontrolled diabetic patients differed significantly only on Internal Health Locus of Control and Compliance.

Health Locus of Control and Compliance with Medical Regimen

Controlled diabetic patients scored significantly higher on IHLC as compared to uncontrolled diabetic patients. They also scored significantly higher on compliance.

TABLE 2

Comparison of Male and Female Controlled diabetic patients on Health Locus of Control and compliance to medical regimen

HLC Dimensions	Groups	Mean	SD	t-value
IHLC	Female Controlled	23.26	2.69	.45
	Male Controlled	23.65	2.85	
CHLC	Female Controlled	15.63	2.85	.70
	Male Controlled	15.05	2.90	
PHLC	Female Controlled	24.36	2.80	.40
	Male Controlled	24.69	2.78	
Compliance	Female Controlled	25.73	3.85	2.17*
	Male Controlled	23.38	3.93	

The values in Table 2 show that females and males whose diabetes was under control did not differ on any dimension of HLC. However, they significantly differed on compliance. Women scored significantly higher on compliance as compared to men.

TABLE 3

Comparison of Female and Male Uncontrolled Diabetes Patients Health Locus of Control and Compliance to Medical Regimen

HLC Dimensions	Groups	Mean	SD	t-value
IHLC	Female	19.20	2.43	.319
	Male	18.95	2.93	CHLC
Female	15.49	3.20	.425	
	Male	15.83	2.35	
PHLC	Female	24.69	2.93	.73
	Male	24.98	2.46	
Compliance	Female	20.50	3.29	.272
	Male	20.23	3.59	

The values in Table 3 show no significant difference between the means of male and female uncontrolled diabetes patients on any variable.

Discussion: Diabetes is a serious health problem which requires management through health care behaviors including adherence /compliance to medical regimen. The findings of the present study indicate that patients whose glycemic level is well under control are internally controlled as compared to those whose glycemic level is not under control. These findings are consistent with earlier findings which indicate that people with internal control of health beliefs have better metabolic control in diabetes (Stenstrom, et. al., 1998), general health (Lee Susan, 2003) and beneficial health behaviour such as regular exercise etc. No gender differences could be obtained on health locus of control variables. This

finding is in consonance with an earlier study conducted by Aalto and Uutela (1997) who did not find any difference in locus of control by gender.

Also, controlled diabetes patients were more compliant as compared to uncontrolled diabetes patients. Furthermore, females (with controlled glycemic level) were more compliant with their medical regimen as compared to their male counterparts.

As the findings of the present study suggest that health locus of control plays an important role in controlling diabetes, intervention programmes for diabetes management should aim at improving internal locus of control and encouraging adherence to medical regimen in diabetes patients.

REFERENCES

- Aalto, A. M. & Uutela, A. (1997). Glycemic control, self-care behaviors, and Psychosocial factors among insulin treated diabetics: A test of an extended health belief model. *International Journal of Behavioral Medicine*, 4: 191-214.
- Brown, S. A., & Hedges, L.V. (1994). Predicting metabolic control in diabetes. *Nursing Responses*, 43(6), 362-368.
- Hill-Briggs, F., Gary, T.L., Bone, L.R., Hill, M.N., Levine, D.M. & Brancati, F.L. (2005). Medication Adherence and Diabetes Control in Urban African Americans with type 2 Diabetes. *Health Psychology*, 24, 349-357.
- Koro, C.E., Bowlin, S.J., Bourgeois, N. & Fedder, D.O., (2004). Glycemic control from 1988 to 2000 among U.S. adults diagnosed with type 2 diabetes: a preliminary report. *Diabetes Care*. 27: 17-20.
- Lee, S., (2003). Health behaviors in people with serious mental illness: the role of illness cognition, optimism, and health locus of control on diabetes. *Dissertation Abstracts International: Section B: The Science and Engineering*, 64 (6 = b) 2926.
- O' Hea & Erin, L., (2005). Adherence to medical regimen in low income adults with type 2 diabetes: the influence of perceived control constructs. *Dissertation Abstract International: Section B: The Science and Engineering*, 65 (7 - b), 3718.
- Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80(1), Whole No. 609.
- Spikmans, F.J., Brug, J., & Doven, M.M., (2003). Why do diabetic patients not attend appointment with their dietician? *Journal of Human Nutrition and Dietetics*, 16(3): 151-158.
- Stenstrom, U., Wilkby, A., Andersson, P.-O. & Ryden, O., (1998). Relationship between locus of control beliefs and metabolic control in insulin- dependent diabetes mellitus. *British Journal of Health Psychology*. 3 (Part-1), 15-25.
- Wallston, B.S., Wallston, K. A., Kaplan, G.D., & Maides, S.A. (1976). Development and Validation of Health Locus of Control (Hlc) Scale. *Journal of Consulting and Clinical Psychology*, 44, 580-585.
- Wilson, D.P., & Enders, R.K. (1986). Compliance with blood glucose monitoring in children with type 1 diabetes mellitus. *Behavioral Pediatrics*, 108, 1022-1024.
- Wing, R.R., Epstein, L.H., Nowalk, M.P., Koeske, R., Hagg, S. (1985). Behavior change: weight loss and physiological improvements in type II diabetic patients. *Journal of Consulting and Clinical Psychology* 53: 111-22.

ADJUSTMENT: AN INDICATOR OF WELL-BEING AMONG YOUNG ADULTS

Rekha, Punam Midha** and Ritu Rani****

ABSTRACT

Adjustment is a continuous process which starts from cradle to grave. The adjustment of young adults is a matter of great concern for the psychologists because numerous responsibilities crop up at this stage of life. How the adjustment in different spheres of life affect well-being is a big query in the existing social scenario? Keeping this in mind, current researchers decided to explore the potency of adjustment to predict well-being among young adults. A purposive sample of 200 young adults aged 18-22 years old, both male and female was drawn from the various colleges of Rohtak city. Results revealed the healthy adjustment pattern and higher quality of well-being. Further regression analysis indicated that two areas of adjustment such as emotional and home are found to be potent predictors of well-being of young adults.

Keywords: Adjustment, Well-being, Predictor, Young adults.

INTRODUCTION

Life is a journey and its different stages are halting stations. Every stage of life demands adjustment, while adjustment goes from birth to death. Adjustment refers to the harmonious relationship between the person and the environment. It is a process in which a living organism maintains a balance between the person and the environment. It is a process in which a living organism maintains a balance between his/her needs and the circumstances that influence the satisfaction of the needs. There are some models which explain and describe adjustment. As moral model defines adjustment or maladjustment in terms of morality norms of expected behaviour of a pattern in a given society. Those

* M.Phil Trainee, Department of Psychology, M.D.U. Rohtak.

** Professor, Department of Psychology, M.D.U. Rohtak.

*** Research Scholar, Department of Psychology M.D.U. Rohtak.

who follow norms are virtuous and those who don't are called sinners. While micro-biological model holds genetic, physiological and biochemical factors as responsible for one's adjustment. The another model such as Psychoanalytic where Freud proposed that man is pleasure seeking animal by nature, and always tries to avoid pain. As long as ego maintains a balance between urges of id and superego adjustment is there and when ego fails to do so, the result is maladjustment. On the contrary sociogenic or cultural model emphasizes that adjustment depends upon how much an individual goes by societal norms. These norms are learned through social experience by the individual himself as highlighted by behavioural model.

Adjustment is a continuous process during the life span, first of all it is affected by parental attachment (Engels, Finkenauer & Meeus, 2001; Ross & Fuertes, 2010; Rueger, Malecki, and Demaray 2010), then by schooling where peer groups play a pivotal role in his/her adjustment (Berndt, Hawkins & Jiao, 1999; Lopez & DuBois, 2005). In young adults stress is an significant factor which adversely affects the physical health (Kohlman & Burns, 1996), and mental health (Degenhardt & Hall 2001), thus leading to maladjustment. However, Well adjustment in one's life leads to higher quality of well-being which is defined as a positive state of human being. There are mainly two approaches which has defined well-being. The hedonistic approach reflects the view that well-being consists of pleasure of senses, while eudemonic view suggests that well-being lies in the actualization of human potentials.

Well-being doesn't simply connotes attainment of pleasure but it involves striving for perfection through realization of one's true potential. It includes six aspects such as autonomy, personal growth, self acceptance, life purpose, honesty and personal relatedness.

Martin Seligman (2011) proposed a PERMA model which is an acronym for a model of well-being, where P indicates positive emotions, E- engagement, R- relationship, M-meaning, A stands for achievement. There are so many components of well-being viz physical, economic, social, emotional and psychological etc. There are plethora of studies which have reported adjustment serves as a resource for one's well-being. As it has been reported that healthy physical life which is gained through physical exercise such as yoga and acrobatics results in positive well-being (Norris, Carroll and Cochrane, 1992; Steptoe & Butler, 1996). Enhanced subjective well-being (Malathi, Damodaran, Shah, Patil & Maratha, 2000) reduced depression, anxiety and improved mental well-being (Fox, 1999; Kirkcaldy, Shephard & Siefen, 2002; Sacker & Cable, 2005; Bray & Kwan 2006; Chavis, 2010; Ussher, Owen, & Whincup, 2007).

Similarly well adjustment in emotional area also enhances emotional well-being (Kannas & Levalahti, 1999; Fredrickson & Joiner, 2002). Abraham Sommerhalder & Abel, (2010), concluded that better adjustment in social life promotes mental well-being through social support and security. As Aquilino and

Supple (2001) concluded that maladjustment in home due to faulty parenting leads to lower well-being. However the recent channels of social network such as internet use is not found to be associated with daily well-being (Gross & Gable, 2002). On the contrary Kim and Lee (2011) reported healthy effects of interaction on facebook. On the basis of above findings it may be inferred that the overall healthy adjustment in one's life leads to healthy well-being. The present researchers opted to explore the levels of adjustment and well-being of young adults, who are generally less targeted of the researches.

Objectives

The main objectives of the present study were:

1. To find out the level of adjustment among young adults.
2. To explore the level of well-being of young adults.
3. To investigate the role of adjustment in the well-being of young adults.

METHOD

Design

A correlational design was used in the present study.

Sample

For the present study a sample of 200 undergraduate young adults of both sex (male and female) was selected from the different colleges of Rohtak, Haryana on the basis of purposive sampling technique within the age range of 18-22 years.

Tools

In this study the following tools were used in the present study to collect the required information from the subjects.

Adjustment Inventory for College Students:

Adjustment inventory for college students was given by A.K.P. Sinha and R.P. Singh (1995). This has been designed in Hindi to segregate normal from poorly adjusted college students in respect of five areas of adjustment (Home, Health, Social, Emotional, Educational). It has 102 items (Home 16, Health 15, Social 19, Emotional 31, Educational 21). Transparent scoring keys are provided separately for each area and response marked under circle is considered and each has assigned a weightage of one (1) score. Subjects can be classified into five categories in according with the raw scores obtained by them on the inventory. Individuals scoring high in Home Adjustment tend to be unsatisfactorily adjusted toward their home surroundings.

Low scores in health adjustment indicate satisfactory health adjustment and high scores unsatisfactory adjustment. Individuals scoring low in social adjustment are submissive and retiring. High scores indicate aggressive behaviour. High score in emotional adjustment indicates unstable emotion. Individuals with low

scores tend to be emotionally stable. Individuals scoring high in educational adjustment are poorly adjusted toward their curricular programmes. People with low scores are interested in the educational activities.

- **Reliability:** The coefficient of reliability i.e. test-retest is 0.93 and split half is 0.93.
- **Validity:** Item analysis validity coefficients were determined for each item by biserial correlation method and values were significant at 0.01 level.

PGI General Well-being Measure

The PGI General Well-being Measure English version was given by S.K. Verma and A. Verma (1989). It has twenty items for measuring wellbeing (distress, energy level satisfaction, cheerfulness, relaxation, emotional behavioral control etc). A score of one is awarded for marking a tick in the cell against each item which is applicable on subject. The total wellbeing score is derived by summing the number of ticks with scores ranging from 0-20. According to normative data the higher the score, higher would be the level of wellbeing.

- **Reliability:** The coefficient for test retest reliability is 0.91.

Procedure

The present research work was aimed to explore the levels of adjustment and well-being of young adults. For this purpose the relevant tools were arranged. After that the permission from the principals of the different colleges and consent from students were sought and all the tests were administered on them after establishing rapport with them. Instructions relevant to each test was given to them and they filled the proformas according to the instructions mentioned in proforma.

When the tests were completed, scoring was done according to the norms of each test. Different statistics have been applied to analyze the data including descriptive statistics (mean, S.D) and regression analysis.

RESULTS AND DISCUSSION

Obtained scores on adjustment and well-being were statistically analysed.

TABLE 1
Obtained Mean and S.D. Scores on Adjustment and Well-being.

Variables	Mean	S.D.	Interpretation
Overall Adjustment	34.27	9.42	Average
Home	5.02	2.11	Average
Health	4.27	1.97	Average
Social	7.52	2.15	Average
Emotional	10.84	3.59	Average
Educational	6.79	2.44	Average
Well-being	15.47	2.54	High level

Table 1 clearly reveals that overall mean score of adjustment is 34.27, which suggests that young adults have average level of adjustment. Further the adjustment in various areas has been studied in depth. As the mean scores for home, health, social, Emotional and Educational adjustment are 5.02, 4.27, 7.52, 10.84, 6.79 respectively, indicating the average level of adjustment in each area. Interestingly it is observed that none of the participants fall in extreme category of adjustment *i.e.* unsatisfactory or excellent. In this way first objective is meted out which highlights the moderate level of adjustment among young adults.

The second objective is also examined by analysing the mean score for well-being *i.e.* 15.47 indicating the high level of general Well-being. The obtained range of score *i.e.* 13-17 also reveals that none of the participant have poor Well-Being. The overall findings emphasize that these days young adults may have feeling of contentment, happiness, satisfaction with life's experiences. In this way on the basis of current findings it may be inferred that despite the average level of adjustment the young adults are enjoying high quality of Well-Being.

TABLE 2
Summary of Linear Regression adjustment (IV)
as a Predictor of Well-being (DV)

Predictor	R	R square	Adjusted R square	Std. error of estimate	β coefficient
Adjustment	.514	.264	.260	2.18	-.514*

* $p < .001$

Note: Less the scores, better the adjustment.

Dependent variable – wellbeing

Independent variable - adjustment

In order to verify the third objective *i.e.* "To investigate the role of adjustment in the well-being of young adults" linear regression analysis was applied as shown in Table 2. The high value of R (*i.e.* .514) as depicted in table 2 indicates a positive moderate degree and highly significant correlation ($p < .001$) between adjustment and well-being, with 26.4% of variance is predicted by adjustment of youth. The β value (-.514) shows the significance of predictive relationship. This implies that with every unit of increase in adjustment scores (high scores indicates maladjustment), there is likelihood of decrease in the level of well-being (high scores indicates high quality of Well-being). In other words, better the adjustment, healthier is the general Well-Being and Vice-Versa.

Thus the present findings highlight adjustment as a robust predictor of well-being among young adults. The findings are in line with those of earlier findings (Fox, 1999; Sacker et.al, 2005; Aquilino, 2001; Steptoe, 1996). It may be concluded on the basis of current findings that contemporary young adults

though have been found to be average in adjustment, yet adjustment has emerged as a robust predictor of well-being which is found to be of high quality. There is a need of enhancement in adjustment level which will automatically enhance the level of well-being among young adults.

The current findings endorse some suggestions that there is a need to enhance the adjustment level of young adults, who are the ignored sample for researchers.

REFERENCES

- Abraham, A., Sommerhalder, K. & Abel, T. (2010). Landscape and well-being: as coping study on the health-promoting impact of outdoor environments. *International journal of public health*, 55, 59-69.
- Aquilino, W. S., & Supple, A. J. (2001). Long-Term Effects of Parenting Practices During Adolescence on Well-Being Outcomes in Young Adulthood. *Journal of Family Issues*, 22, 289-308.
- Berndt, T. J., Hawkins, J.A., & Jiao, Z. (1999). Influence of friends and friendships on adjustment to junior high school children. *Merrill palmer quarterly*, 45, 13-41.
- Bray, S. R., & Kwan, M. (2006). Physical Activity Is Associated With Better Health and Psychological Well-Being During Transition to University Life. *Journal of American College Health*, 55, 77-82.
- Chavis, S. (2010). Teen Sports Participation Contributes to Overall Well-Being. *International Journal of Mental Health and Well-being*, 12, 114- 119.
- Degenhardt, L., & Hall, W. (2001). The relationship between tobacco use, substance-use disorders and mental health: results from the National Survey of Mental Health and Well-Being. *Nicotine Tobacco Research*, 3, 225-234.
- Engels, C., Finkenauer, C., & Meeus, W. (2001). Parental attachment and adolescent's emotional adjustment: The associations with social skills and relational competence. *Journal of Counseling Psychology*, 48, 428-439.
- Fox, K.R. (1999). The influence of physical activity on mental well-being. *Public Health Nutrition*, 2, 411-418.
- Fredrickson, B.L. & Joiner, T. (2002). Positive Emotions Trigger Upward Spirals Toward Emotional Well-Being. *Psychological Science*, 13, 172-175.
- Gross, E. F., and Gable, S. L. (2002). Internet Use and Well-Being in Adolescence. *Journal of Social Issues*, 58, 75-90.
- Kannas, L. & Levälähti, E. (1999). Perceived sleep quality and its precursors in adolescents. *Journal of Youth and Adolescence*, 14, 155-166.
- Kim, J., and Lee, J. R. (2011). Behavior and Social Networking. *Cyberpsychology*, 14, 359-364.
- Kirkcaldy, B. D., Shephard, R.G. & Siefen, R. (2002). The relationship between physical activity and self-image and problem behaviour among adolescents. *Social Psychiatry and Psychiatric Epidemiology*, 37, 544-550.
- Kohlmann, C., & Burns, L.R. (1996). The effects of academic stress on health behaviors in young adults. *Anxiety, Stress & Coping: An International Journal*, 9, 123-133.
- Lopez, C. & DuBois, D.L. (2005). Peer Victimization and Rejection: Investigation of an Integrative Model of Effects on Emotional, Behavioral, and Academic Adjustment

Adjustment: An Indicator of Well-being among Young Adults

- in Early Adolescence. *Journal of Clinical Child & Adolescent Psychology*, 34, 25-36.
- Malathi, A., Damodaran, A., Shah, N., Patil, N., & Maratha, S. (2000). The effect of yogic practices on subjective well-being. *Journal of Physiol Pharmacol*, 44, 2202-2206.
- Norris, R., Carroll, D., & Cochrane, R. (1992). The effects of physical activity and exercise training on psychological stress and well-being in an adolescent population. *Journal of Psychosomatic Research*, 36, 155-165.
- Ross, J., and Fuertes, J. (2010). Parental Attachment, Inter-parental Conflict, and Young Adults' Emotional Adjustment. *The Counseling Psychologist*, 38, 1050-1077.
- Rueger, S. Y., Malecki, C. K. & Demaray, M. K. (2010). Relationship Between Multiple Sources of Perceived Social Support and Psychological and Academic Adjustment in Early Adolescence: Comparisons Across Gender. *Journal of Youth and Adolescence*, 39, 47-61.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069-1081.
- Sacker, A., & Cable, N. (2005). Do adolescent leisure-time physical activities foster health and well-being in adulthood? Evidence from two British birth cohorts. *European Journal of Public Health*, 16, 331-335.
- Seligman, M.E.P. (2011). *Flourish: A visionary New Understanding of Happiness and Well-Being*. Royal Society of Arts.
- Sinha, A. K. P., & Singh, R. P. (1995). *Manual for Adjustment Inventory for College Students (AICS)*, Agra: National Psychological Corporation.
- Steptoe, A. S., & Butler, N. (1996). Sports participation and emotional wellbeing in adolescents. *The lancet*, 33, 1789-1792.
- Ussher, M. H., Owen, C.G., & Whincup, P.H. (2007). The relationship between physical activity, sedentary behaviour and psychological wellbeing among adolescents. *Social Psychiatry and Psychiatric Epidemiology*, 42, 851-856.
- Verma, S. K., & Verma, A. (1989). *Manual for PGI General Well-being Measure*, Lucknow: Ankur Psychological Agency.

PSYCHOLOGICAL DISORDERS: COMPARISON BETWEEN MALE AND FEMALE EXPERIENTS AND NON-EXPERIENTS OF PARANORMAL PHENOMENA

Naved Iqbal*, Mehfooz Ahmad**,
Sheema Aleem*** and Divya Mudgil****

ABSTRACT

Mainstream psychology and modern science does not believe in the existence of paranormal phenomena. Some researchers believe that those who claim to have paranormal phenomena also experience psychological problems others do not agree with this view. Therefore, the aim of present study was to see whether the individuals with paranormal phenomena experiences different psychological disorders. The study comprised 115 subjects, 54 experients and 61 non-experients of paranormal phenomena. All the participants were Post Graduate students. They were selected from different departments of Jamia Millia Islamia, New Delhi. Mania scale, schizotypal personality questionnaire, dissociative experience scale, Beck anxiety inventory and Beck depression inventory were administered on the participants to study different psychological problems. ANOVA was used to analyze the obtained data. The results reveal that the experients of paranormal phenomena had reported more manic, dissociative, schizotypal, anxiety, depression as compared to non experient group.

Key Words: Paranormal, mania, dissociative, schizotypal, anxiety, depression.

INTRODUCTION

Thalbourne (2003), a psychologist and a prominent researcher in the field, defined paranormal: A phenomenon is paranormal if it refers to hypothesized processes that in principle are physically impossible and outside the realm of

* Corresponding author- Prof. Naved Iqbal, Department of Psychology, Jamia Millia Islamia, New Delhi-25, Email- navedi2005@gmail.com, Mobile- 09968069547

human or animal capabilities as presently conceived by conventional scientists... often used as a synonym for "psychic," "parapsychological," "attributable to psi," or even "miraculous" (though shorn of religious overtones). (pp. 83-84)

Paranormal phenomena are studied in parapsychology. Parapsychology is a discipline that seeks to investigate the existence, causes and conditions of psychic abilities, such as telepathy, precognition clairvoyance and psychokinesis, it also studies near-death experiences, out-of-the-body experiences, crisis apparitions, retro-cognitions, reincarnation memories, ghosts and life after death and so on by trying to use the scientific method.

Given the fact that more than half of the population has had at least one paranormal experience (Ross & Joshi, 1992), it is important to understand why people have such experiences. They are sometimes considered as being associated with mental disorders and the Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR) provides criteria for several mental disorders accompanied by paranormal experiences. The famous psychiatrist and philosopher Karl Jaspers, in his book *General Psychopathology* (Jaspers, 1913/1997), stated that all claimed paranormal phenomena could really only be manifestations of psychiatric symptoms.

Those who report paranormal phenomena have been found to experience higher levels than normal of psychological symptoms (McCreery & Claridge, 1995), and those with mental disorders report unusually strong convictions about supernatural phenomena (Ekblad & Chapman, 1983; Thalbourne, 1994). Stronger beliefs in the paranormal have been associated with higher scores on schizophrenia relevant measures in the general population (Thalbourne & French, 1995; Tobacyk & Wilkinson, 1990; Windholz & Diamant, 1974). People who have been diagnosed with psychotic disorders (bipolar, brief reactive psychosis, and schizophrenia) demonstrate a high phenomenological overlap with psi related experiences.

Psychological disorders are of various types. Important among them are:

- **Mania:** The presence of which is a criterion for certain psychiatric diagnoses, is a state of abnormally elevated or irritable mood, arousal, and/or energy levels (Berrios, 2004). In a sense, it is the opposite of depression.

In addition to mood disorders, individuals may exhibit manic behaviour as a result of drug intoxication (notably stimulants such as cocaine or methamphetamine), medication side effects (notably steroids), or malignancy. However, mania is most often associated with bipolar disorder, where episodes of mania may alternate with episodes of major depression. Gelder et al., (2005) suggests that it is vital that mania is predicted in the early stages because the patient becomes reluctant to comply to the treatment.

Mania varies in intensity, from mild mania (known as hypomania) to full-blown mania with psychotic features including hallucinations, delusion of grandeur, suspiciousness, catatonic behaviour, aggression, and a preoccupation with thought and schemes that may lead to self neglect. Thalbourne (1999) found that the Manic Experience showed a pattern of relationships with the belief in the Paranormal, absence of Social Naïveté, and Psychoticism.

• **Schizotypal Personality:** According to DSM IV-TR, this disorder is not classified under specific personality disorder but instead along with schizophrenia. Characteristics are as follows:

1. Inappropriate or constricted affect (the individual appear cold and aloof)
2. Behaviour or appearance that is odd, eccentric, or peculiar
3. Poor rapport with others and a tendency to social withdrawal
4. Odd beliefs or magical thinking, influencing behaviour and inconsistent with subcultural norms
5. Subconscious or paranoid ideas
6. Obsessive rumination without inner resistance, often with dysmorphophobic, sexual or aggressive contents
7. Unusual perceptual experiences including somatosensory (bodily) or other illusion, depersonalization or derealization
8. Vague, circumstantial, metaphorical, overelaborate, or stereotyped thinking, manifested by odd speech or in other ways, without gross incoherence.

A large amount of research has indeed shown a link between schizotypy and paranormal belief and experiences (Schofield & Claridge, 2007). Cognitive disorganisation was found to moderate the association between schizotypy and subjective quality of paranormal experience, with highly cognitive disorganised participants showing a negative schizotypy/distressing experiences relationship, while cognitively organised participants showed a positive schizotypy/pleasant experiences relationship. These results were interpreted in terms of the protective mechanism of having a framework of belief in which to place paranormal experiences, a mechanism more available to cognitively organised individuals. (Schofield & Gordon, 2007).

Dissociative Disorder

Dissociative Disorder are defined as condition that involve disruption or breakdown of memory, awareness, identity and/or perception. The hypothesis is that symptoms can result, to the extent of interfering with person's general functioning, when one or more of these functions are disrupted.

The four dissociative disorders listed in the DSM IV TR are as follows

- **Depersonalization Disorder:** Period of detachment from self or surrounding which may be experienced as “unreal” (lacking in control of or “outside of” self) while retaining awareness that this is only a feeling and not a reality.
- **Dissociative Amnesia:** (formerly psychogenic amnesia)-noticeable impairment of recall resulting from emotional trauma.
- **Dissociative Fugue:** (formerly psychogenic fugue)-physical desertion of familiar surrounding and experience of impaired recall of the past. This may lead to confusion about actual identity and the assumption of a new identity.
- **Dissociative identity disorder:** (formerly multiple personality disorder)- The alternation of the two or more distinct personality states which impaired recall, among personality states, of important information.

Experiments were found to show higher levels of disassociating, absorption, paranormal belief, paranormal experience, self-reported psychic ability, fantasy proneness, tendency to hallucinate, and self-reported incidence of sleep paralysis (French, 2008). The 9 individuals who reported prior out-of-body experiences, relative to those 31 who did not, exhibited significantly greater self-reported dissociative alterations in body-image during the mirror-gazing task, even when the influence of scores on New Age belief was controlled for statistically. The same differential relationship was not found between 6 individuals who did and 34 who did not report out-of-body experiences during the task. (Terhune, 2006).

Anxiety

Anxiety has become central for psychology at least since Freud. He considered anxiety as “uniquely unpleasant feeling state, accompanied by certain specific efferent phenomena and the perception thereof” (Freud, 1936, p.70). Thus according to him anxiety combines a strongly negative emotional state (such as fear, worry, uneasiness) with somatic symptoms (such as heart palpitations, fatigue, nausea, chest pain, shortness of breath, stomach aches, or headaches), and cognitive representations of that state, involving the perception of the emotional and somatic state and experiencing it consciously. *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, text revision (DSM IV-TR), anxiety disorders include generalized anxiety disorder (GAD), social anxiety disorder (also known as social phobia), specific phobia, panic disorder with and without agoraphobia, obsessive-compulsive disorder (OCD), posttraumatic stress disorder (PTSD), anxiety secondary to medical condition, acute stress disorder (ASD), and substance-induced anxiety disorder.

Depression

Depression is a state of low mood and aversion to activity that can affect a person's thoughts, behaviour, feelings and sense of well-being (Salmans, 1997). Depressed people can feel sad, anxious, empty, hopeless, worried, helpless, worthless, guilty, irritable, hurt, or restless. They may lose interest in activities that once were pleasurable, experience loss of appetite or overeating, have problems concentrating, remembering details, or making decisions, and may contemplate, attempt, or commit suicide, insomnia, excessive sleeping, fatigue, loss of energy, or aches, pains, or digestive problems may also be present (NIMH, 2012). ADHD, dissociation, and depression were associated with enhanced tendencies toward paranormal and cryptozoological beliefs, although participants who believed in each of the phenomena differed from one another in predictable and psychologically distinguishable ways (Matthew et al, 2006). Analysis showed significantly higher depressive attributional styles among high scorers on paranormal phenomena than low scorers (Dudley & Whisnand, 2000).

Rationale

Given the fact that more than half of the population has had at least one paranormal experience (Ross & Joshi, 1992), it is important to understand why people have such experiences. They are sometimes considered as being associated with mental disorders. This association was confirmed by several studies showing a correlation between paranormal beliefs and magical ideation (Eckbald & Chapman, 1983; Tobacyk & Wilkinson, 1990), hypomania and schizophrenia (Windholz & Diamant, 1974), manic depressiveness (Thalbourne & French, 1995) and negative relation with psychological adjustment (Irwin, 1991). On the other hand, some research has suggested that there is no link between paranormal experiences and mental health disorders (Goulding, 2004). Therefore, present study was an effort to explore the psyche of those people who have paranormal experiences in terms of certain psychological problems and compare them with those who do not have such experiences.

METHODS

Participants

Total participants of the present study comprised 115 subjects, 54 experienced and 61 non-experienced of paranormal phenomenon. There were 26 males and 28 females in experienced group. There were 31 male and 30 female in non-experienced group. All the participants were Post Graduate students. The age ranged from 20-24 years. They were selected from different departments of Social Science faculty such as Political science, Psychology, Economics and Sociology of Jamia Millia Islamia, New Delhi.

Tools

Goldberg's Mania Scale: This scale consists of 18 items developed by pioneering researcher Dr Ivan K Goldberg (1993). It is a brief self-report questionnaire designed to identify the patients with mania psychopathology. Contents for the scale's 18 items were garnered from extensive interviews with dissociative patients and consultation with clinical experts. In this scale there are 18 questions which were used to rate mania. On the basis of answers to these questions, the investigator could rate person on mania. The response categories of the scale are:

1. Not at all
2. Just a little
3. Some What
4. Moderately
5. Quite a lot
6. Very Much

Schizotypal Personality Questionnaire: The SPQ-B (Raine and Benishay, 1995) is a 22 item dichotomous (yes/no) questionnaire derived from the larger SPQ questionnaire (Raine, 1991). The 22 items in the new SPQ-B scale, each question answered affirmatively receives a score of 1, so that scores can range from a minimum of 0 to a maximum of 22.

Dissociative Experience Scale: This scale was developed by Carlson & Putman (1995). It is a brief self-report questionnaire designed to identify patients with dissociative psychopathology and to provide a means of qualifying experiences. The scale taps a broad range of dissociative experiences including disturbances in memory, identity and cognition, feeling of derealization, depersonalization, absorption in imaginative involvement. The DES II uses a more convenient 11 point Likert Scale. The Response are ranging from never to always. Total scores are obtained by averaging the item scores. The weighted means of the test-retest and internal consistency reliabilities from these studies are .85 and .93 respectively.

Beck Anxiety Inventory: This inventory was developed by Beck, Epstein, Brown, & Steer (1988). BAI is a 21-question multiple-choice self-report inventory

that is used for measuring the severity of an individual's anxiety. How the subject has been feeling in the last week, expressed as common symptoms of anxiety (such as numbness, hot and cold sweats, or feelings of dread). Each question has the same set of four possible answer choices, which are arranged in columns and are answered by marking the appropriate one with a cross. The response categories are as follows:

1. Not At All
2. Mildly but it didn't bother me much.
3. Moderately – it wasn't pleasant at times
4. Severely – it bothered me a lot

Beck Depression Inventory: Depression was measured by Beck Depression Inventory developed by Beck, Steer, & Brown, (1996). BDI-II contains 21 questions, each answer being scored on a scale value of 0 to 3. The test was also shown to have a high one-week test-retest reliability (Pearson $r = 0.93$), suggesting that it was not overly sensitive to daily variations in mood. The test also has high internal consistency ($\alpha = .91$).

Procedure

The experients of paranormal phenomena were identified with the help of interview schedule. It had six question which were based on different paranormal abilities *i.e.* precognition, telepathy, clairvoyance and PK. Those who responded positively on at least two questions were considered as experients. After the informed consent had been taken the students were asked to fill the questionnaire. Before handing over the questionnaire to them, they were briefed about it and were asked to mark the answers as suited to them. Obtained data were analyzed with the help of ANOVA.

RESULTS

The obtained results are presented in the following tables.

TABLE 1
Showing Means of different Groups on Mania

Gender	Types of Experients		Mean of Mania
	Experients	Non-experients	
Males	44.46	34.42	39.44
Females	34.46	26.47	30.46
Total Mean	39.28	30.51	

Table 2 revealed significant F-ratios for type of experients and gender on mania at .01 levels. However, Interaction effect was not found to be significant at .05 levels. Table-1 showed that experients of paranormal scored higher than non-experients and male scored higher than females on Mania.

TABLE 2
 Showing ANOVA Summary for Mania

Source	Df	Mean Square	F	Sig
Type	1	2328.403	14.782	.000
Gender	1	2305.264	14.635	.000
Type * Gender	1	1129.909	.190	.664
Error	111	157.517		
Total	115			
Corrected Total	114			

TABLE 3
 Showing Means of different Groups on Schizotypal Personality

Gender	Types of Experiens		Mean of Mania
	Experiens	Experiens	
Males	10.77	7.77	9.27
Females	11.61	6.23	8.92
Total Mean	11.20	7.02	

TABLE 4
 Showing ANOVA Summary for Schizotypal Personality

Source	Df	Mean Square	F	Sig
Type	1	501.102	21.2011	.000
Gender	1	3.535	.143	.706
Type * Gender	1	40.486	1.633	.204
Error	111	24.794		
Total	115			
Corrected Total	114			

Table 4 showed significant F-ratio at .01 levels for type of experiens on schizotypal personality. Gender and interaction effect were not found to be significant at .05 levels. Table-3 revealed that experiens group scored higher than non-experiens group on schizotypal personality.

TABLE 5
 Showing Means of different Groups on Dissociative Disorder

Gender	Types of Experiens		Mean of Mania
	Experiens	Experiens	
Males	117.73	100.84	109.28
Females	109.07	80.53	94.8
Total Mean	113.24	90.85	

TABLE 6
Showing ANOVA Summary for Dissociative Disorder

Source	Df	Mean Square	F	Sig
Type	1	14766.688	6.504	.012
Gender	1	6002.515	2.644	.107
Type * Gender	1	970.400	.427	.515
Error	111	2270.312		
Total	115			
Corrected Total	114			

Table 6 reveals significant F-ratio for type of experients on Dissociative Experiences at .01 levels. However, gender and interaction effect were not found to be significant at .05 levels. It may be observed from table-5 that experients group scored higher than non-experient group on this dimension.

TABLE 7
Showing Means of different Groups on Anxiety

Gender	Types of Experients		Mean of Mania
	Experients	Experients	
Males	17.85	12.87	15.36
Females	15.29	10.03	12.66
Total Mean	16.52	11.48	

TABLE 8
Showing ANOVA Summary for Anxiety

Source	Df	Mean Square	F	Sig
Type	1	748.410	11.824	.001
Gender	1	208.484	3.294	.072
Type * Gender	1	.550	.009	.926
Error	111	63.293		
Total	115			
Corrected Total	114			

Table 8 revealed significant F-ratio at .01 levels for type of experient of paranormal phenomena. Significant differences were not found at .05 levels for gender and interaction effect. Table-7 showed that experients group experienced more anxiety than non-experients group.

TABLE 9
Showing Means of different Groups on Depression

Gender	Types of Experiens		
	Experiens	Experiens	
Males	18.46	15.94	17.20
Females	19.50	11.60	15.55
Total Mean	19.00	13.80	

TABLE 10

Showing ANOVA Summary for Depression

Source	Df	Mean Square	F	Sig
Type	1	777.740	6.830	.010
Gender	1	77.775	.683	.410
Type * Gender	1	206.624	1.814	.181
Error	111	113.879		
Total	115			
Corrected Total	114			

Table 10 revealed significant F-ratio at .01 levels for type of experient of paranormal phenomena. It may be seen from table-9 that experient group scored higher than non-experients group on anxiety. ANOVA summary Table also reveals that F-ratio was not significant for gender and type- gender interaction at .05 levels.

Discussions

The present study examined the relationship between paranormal experiences and several psychological disorders. Results showed (table-1 & 2) that experiences of paranormal phenomena had reported more manic symptoms than non-experiences group and males reported more manic symptoms than females. Similar findings has been reported by Thalbourne (1999) who found that the Manic Experience showed a pattern of relationships with the belief in the Paranormal, absence of Social relationship, and Psychoticism. Manic experiences measures of paranormal experiences correlate positively with experiences of mania, sometimes in excess. Also paranormal experience correlates significantly positively with the Hypomaniac scale of MMPI: .37 with university students and comparably with patients groups 50 (Thalbourne & Delin, 1994). The seven correlates ranged from .18 to .57 with a moderate median of .41.

Table 3 & 4 revealed that the experient group of paranormal phenomenon had reported more schizotypal symptoms than non-experient group. Other studies has also reported similar findinds. Cognitive disorganisation was found to moderate the association between schizotypy and subjective quality of paranormal experience, with highly cognitive disorganised participants showing a negative schizotypy/

distressing experiences relationship, while cognitively organised participants showed a positive schizotypy/pleasant experiences relationship. These results were interpreted in terms of the protective mechanism of having a framework of belief in which to place paranormal experiences, a mechanism more available to cognitively organised individuals. (Kerry Schofield and Gordon Claridge, 2007). Similarly, Paranormal belief was heavily associated with the cognitive-perceptual component of schizotypy (Hergovich, 2007). In their advanced study Hergovich et al (2008) confirms previous studies showing stronger relations between paranormal belief and the cognitive-perceptual component of schizotypy than to the factors 'interpersonal' and 'disorganized'.

Results also indicated that the experients group of paranormal phenomena had reported more dissociative symptoms than non-experient group. The findings could be supported by the findings of French (2008) who found that the experients showed higher levels of dissociativity, absorption, paranormal belief, paranormal experience, self-reported psychic ability, fantasy proneness, tendency to hallucinate, and self-reported incidence of sleep paralysis. Similarly, the 9 individuals who reported prior out-of-body experiences, relative to those 31 who did not, exhibited significantly greater self-reported dissociative alterations in body-image during the mirror-gazing task, even when the influence of scores on New Age belief was controlled for statistically.

The same differential relationship was not found between 6 individuals who did and 34 who did not report out-of-body experiences during the task (Terhune, 2006). In another study scores on dissociation were positively correlated with those on global paranormal belief and with belief in psi, precognition, spiritualism, and extraordinary life-forms (Irwin, 1994). In the same way Zingrone and Alvarado (1994) reported that in their sample DES score were significantly higher in paranormal/spiritual experients compared with non-experiments ($d = .62$) and higher in persons with multiple mystical experiences versus non-experients, $t(50) = 3.56$, $p = .0001$.

Results showed that the experients of paranormal phenomena had reported more anxiety symptoms than non-experient group. Houran (1997) found that belief in the paranormal experiences were not associated with a lessening of death anxiety. Contrary to hypotheses, neither full Paranormal Belief Scale nor any of 7 paranormal subscale scores showed significant correlations with Trait Anxiety scale scores. Results indicate death anxiety, as measured by the ATDS, showed significant relations with paranormal beliefs and experiences. Present findings provide strong evidence for earlier contentions that paranormal beliefs serve a function analogous to traditional religious beliefs in reducing death anxiety (Lange & Houran 1997). They also indicated decreases in fear of death, depression or anxiety, isolation and loneliness, and worry and fears about the future. A large majority of respondents indicated that these effects resulted from

a combination of more than one paranormal and/or transcendent experience (Kennedy & Kanthamani, 1995).

Present investigation also showed that individuals who experienced paranormal phenomenon had reported more depressive symptoms than those who did not. Other studies also support the present findings. Matthew, Justin and Janet, (2006) found that the ADHD, dissociation, and depression were associated with enhanced tendencies toward paranormal and cryptozoological beliefs, although participants who believed in each of the phenomena differed from one another in predictable and psychologically distinguishable ways. Similar results were observed in the analysis, in which significantly higher depressive attributional styles among high scorers on paranormal phenomena than low scorers (Dudley et al, 2000).

CONCLUSION

In sum, experiencers of paranormal phenomena reported more psychological problems than non-experiencers of paranormal phenomena.

REFERENCES

- Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX: Psychological Corporation.
- Berrios, G.E. (2004). Of mania. *History of Psychiatry*, 15, 105-124.
- Carlson, E. B., & Putman, E. W. (1995). *Manual for Dissociative Experience Scale*. Washington DC: National Institute of Mental Health.
- Eckbald, M., & Chapman, L. (1983). Magical ideation as an indicator of schizotypy. *Journal of Consulting and Clinical Psychology*, 51(2), 215-225.
- Freud, S. (1936). *The Problem of Anxiety*. NY: Norton.
- French, C.C., Santomauro, J., Hamilton V., Fox R., & Thalbourne, M.A. (2008). Psychological aspects of the alien contact experience. *Cortex*, 44(10), 1387-95.
- Gelder, M., Mayou, R., & Geddes J. (2005). *Psychiatry*. 3rd ed. United States: Oxford University Press. p. 101.
- Glossary of Parapsychological terms - Telepathy-Parapsychological Association. Retrieved December 19, 2006.
- Goldberg, I. (1993). Mania Scale. *MentalHealth.Net*.
- Goulding, A. (2004). *Mental health aspects of paranormal and psi related experiences*. Unpublished PhD dissertation. Göteborg: Göteborg University.
- Houran J. (1997). Preliminary study of death anxiety of believers versus percipients of the paranormal. *Psychol Rep.*, 80(1), 345-6.
- Hyman, R. (1985). The Ganzfeld Psi Experiments: A Critical Appraisal. *Journal of Parapsychology*, 49. <http://skepdic.com/telepath.html>. Retrieved 2006-09-13.
- Irwin, H. J. (1991). A study of paranormal belief, psychological adjustment, and fantasy proneness. *Journal of the American Society for Psychical Research*, 85(4), 317-331.
- Jaspers, K. (1913/1997). *General Psychopathology*. Baltimore, MD: Johns Hopkins University Press.

- Lange, R., & Houran J. (1997). Death anxiety and the paranormal: the primacy of belief over experience. *The Journal of nervous and mental disease*, 185(9), 584-586.
- McCreery, C., & Claridge, G. (1995). Out-of-the-body experiences and personality. *Journal of the Society for Psychical Research*, 60, 129-148.
- Milton, J. (1992). Effects of "paranormal" experiences on people's lives: An unusual survey of spontaneous cases. *Journal of the Society for American Psychical Research*, 58(828), 314-323.
- "NIMH · Depression". nimh.nih.gov. Retrieved 15 October 2012. Psychokinesis: From Wikipedia, the free encyclopedia.
- Raina, A. (1991). The SPQ: A scale for Assessment of schizotypal personality based on DSM-III- R criteria. *Schizophrenia Bulletin*, 17, 556-564.
- Ross, C., & Joshi, S. (1992). Paranormal experiences in the general population. *The Journal of Nervous and Mental Disease*, 180(6), 357-361.
- Salmans, S. (1997). *Depression: Questions You Have – Answers You Need*. People's Medical Society.
- Schofield K., and Claridge, G. (2007). Paranormal experiences and mental health: Schizotypy as an underlying factor. *Personality and Individual Differences*, 43(7), 1908-1916.
- Stevenson, I. (1970). *Telepathic impressions: A review and report of 35 new cases*. Charlottesville, VA: University Press of Virginia. (also published 1970 in Proceedings of the Society for Psychical Research, 29).
- Thalbourne, M.A. (1994). Belief in paranormal and its relationship to schizophrenia relevant measures: A conformatory study. *British Journal of Clinical Psychology*, 33, 78-80.
- Thalbourne, M.A., & French, C.C. (1995). Paranormal belief, manic-depressiveness, and magical ideation: a replication. *Personality and Individual Differences*, 18(2), 291-292.
- Thalbourne & Delin. (1998). Transliminality: Further correlates and short measure. *Journal of American Society for Psychological Research*, 92, 402-419.
- Tobacyk, J. J., & Wilkinson, L. V. (1990). Magical thinking and paranormal beliefs. *Journal of Social Behaviour and Personality*, 5, 255-264.
- Thalbourne, M. A. (2003). Theism and belief in the paranormal. *Journal of the Society for Psychical Research*, 67, 208-210.
- Windholz, G., & Diamant, L. (1974). Some personality traits of believers in extraordinary phenomena. *Bulletin of the Psychonomic Society*, 3, 125-126.

RE-VALIDATION OF THE RECOVERY FROM ILLNESS SCALE BY RASCH AND CONFIRMATORY FACTOR ANALYSIS

Mohammad Imran Khan and Abhay Kumar Srivastava***

ABSTRACT

The recovery from illness scale is designed to measure the illness recovery among people suffering from medically manageable non-terminal psychosomatic illness as a unidimensional construct. The scale consists of nine items. The aim of this study was to re-validate the unidimensional structure of the scale through confirmatory factory analysis (CFA) and to compare the factor structure with Rasch analysis. 140 participants suffering from various chronic and non-chronic (non-terminal) illnesses responded on the scale. CFA was carried out to confirm the unidimensional structure of the scale. Initially, uncorrelated and correlated residual term models (based on modification indices) were tested. Out of nine items one item found loading almost nil ($\beta=0$) and hence it was removed. Model was re-tested after removing the item. Correlated residual term model found better fitting with the data. Internal consistency (Crobach's alpha) of the scale was calculated to further ensure the unidimensionality in the data. Once ensuring the unidimensional structure of the scale by using CFA, Rasch analysis was carried out. Results of Rasch analysis revealed two misfitted items based on item fit (infit and outfit) statistics. After deletion of the misfitted items, Rasch data-model fit was achieved. Unidimensionality was confirmed with the principal component analysis of Rasch residuals. Unidimensionality and model fit of Rasch fitted model was compared with the unidimensional model obtained through CFA. Model fit values and item loading of both the model found almost similar. Although, Rasch model resulted in improved psychometric properties of the scale as evident through item and person separation indices.

* D.I.P.R., Defence R & D Organisation, Delhi

** Professor, Department of Psychology, Banaras Hindu University, Varanasi

Keywords: Illness recovery, Rasch, illness, confirmatory factor analysis, validity
Re-Validation of the Recovery from Illness Scale by Rasch and Confirmatory
Factor Analysis

INTRODUCTION

The ultimate goal of any health care practice is to improve the subjective well-being and quality of life. In this context, assessment of treatment effectiveness can be considered as an important factor in determining the quality of life (Guyatt, Feeny, & Patrick, 1993). General discussion related with the subjective well-being as conceptualized by Diener (1984) has emphasized on the importance of global and domain specific life satisfaction (Diener, Suh, Lucas, & Smith, 1999). In the context of clinical assessment of health related quality of life (HRQOL) has been much emphasized as domain satisfaction and several mechanisms related with elevated level of HRQOL has been linked through the pathways of treatment adherence, self-efficacy and many other psychological factors (Kamalski, Hoekstra, van Zanten, Grolman, & Rovers, 2010; Guyatt, Feeny, & Patrick, 1993).

Since last couple of decades, HRQOL has been considered as a significant treatment outcome measure as an indicator of treatment effectiveness (Kamalski, Hoekstra, van Zanten, Grolman, & Rovers, 2010). However, with the paradigm shift in the medical science approaches to illness treatment, general life expectancy has been increased. Hence, in addition to the HRQOL, subjective *feeling* of faster recovery may also be an important predictor of treatment effectiveness. There may be several reasons for considering subjective evaluation of recovery from illness. For example, with the technological advancement of treatment modalities, course and duration of treatment has decreased for many illnesses, many diseases that have earlier been considered as incurable are now very well medically manageable and curable.

Therefore, with the appropriate application of treatment methods, faster recovery from illness is expected. Consequently, quantum of the subjective recovery from illness is necessary to be assessed for ensuring the optimal treatment effectiveness. Further, due to advancement in the treatment technologies many diseases like diabetes or coronary heart disease are well medically manageable resulting in significant increase in number of chronically ill patients. Reduction of physical symptoms, pain and discomfort are very important indicators of treatment outcome measures related with subjective well-being or health related quality of life. Therefore, objective measure of recovery from illness related symptoms may be considered as an important variable in determining the medicinal dose, treatment modality and overall health care practice.

The concept of recovery has recently gained the health care related attention during the last decades (Shepherd, Boardman, & Slade, 2008). Recovery has been defined as the process of managing illness, moving out from the devastating

effects of illness and ability to manage a meaningful life (Anthony, 1993; Meddings & Perkins, 2002). The concept of the assessment of recovery from the symptoms can be considered to fall on a continuum ranging from very subjective to more objectives (Hopper, 2004; Warner, 1994; WHO, 1979). Objective measures of recovery from illness mainly focus on symptomatic and functional aspects (Davidson, 2003; Ridgway, 2001).

There has been some relatively widely used measures of illness recovery measures in the field of psychiatric mental health practices, for example, Illness management and recovery scale (IMR) (Mueser & Gingerich, 2005) and recovery markers questionnaire (RMQ) (Ridgway & Press, 2004). However, no psychometric tool is available to measure illness recovery, especially for the psychosomatic illnesses and more specifically in Indian population except recovery from illness scale (Srivastava, 2008).

However, as the concept of psychometric assessment of illness recovery has been given significant consideration in the assessment of treatment effectiveness. Still the effectiveness of the construct has not been much established. Therefore, the present study was undertaken to evaluate the psychometric properties of the recovery from illness scale through classical test theory (CTT) approach of confirmatory factor analysis (CFA) and item response theory under Rasch rating scale model. CTT is based on the approach of estimating average error in the test score in a given sample and set of test items (Fan, 1998; Anastasi & Urbina, 2002).

Unlike CTT which is based on the observed score theory, IRT belongs to the family of psychometric approach which is based on the true score theories (Fan, 1998; Embretson & Reise, 2000). As a theoretical assumption, IRT adopts an explicit model for the probability of each possible alternative response, based on the function of the latent trait and certain item parameters. The fundamental feature of IRT is that performance on an item is related to the estimated amount of respondent's latent trait (Anastasi & Urbina, 2002). There are different families of IRT models like binary IRT models, such as one parameter logistic model (1-PL) assessing difficulty parameter, two parameter logistic model (2-PL), assessing difficulty and discrimination parameters and three parameter logistic model (3-PL), assessing difficulty, discrimination and guessing parameters.

Apart from these binary IRT model there are also partial credit, graded response and rating scale models. Rasch family of IRT model is special case of 1-PL IRT model that assumes discrimination parameter to unit (Rasch, 1960/1980; Bond & Fox, 2001). Rasch measurement model is based on the sufficient statistic and generally makes use of conditional maximum likelihood for parameter estimation. Describing in detail about the estimation procedure and differences in Rasch and non-Rasch approach is outside the scope of the paper (for further details refer to Rasch (1960/1980), Fox and Jones (1998), Wright and Stone (1979), Bond and Fox (2001)).

Rasch is the simplest but most stringent IRT model in its parameter specification for data-model fit assessment (Bond & Fox, 2001; Rasch, 1960/1980). The basic strength of the Rasch analysis is the sample or population independent estimation of item parameter (Wright & Stone, Best Test Design, 1979). It provides the estimate of goodness of fit between the item difficulty and person ability on the same invariant (logit) scale (Wright, 1992). Assumptions of Rasch models include unidimensionality, local independence and parameter invariance (Bond & Fox, 2001; Rasch, 1960/1980). These properties of Rasch measurement are its unique features that make it applicable for construct validation as well as for objective measurement in any field of psychometric evaluation.

Recently there has been an increasing trend for using Rasch measurement model in the health research (Fox & Jones, 1998; Ramp, Khan, Misajon, & Pallant, 2009). The implication of Rasch approach in health psychological research has been motivated by several potential advantage of Rasch model. For example, reducing the number of items in the scale without any loss in the psychometric properties, ability to identify items not-fitting with the data, ensuring parameter invariance and sample independent estimation of item parameters (Hambleton, Swaminathan, & Rogers, 1991; Hambleton & Swaminathan, 1985).

METHODS

Participants

Patients suffering from various chronic and non-chronic illnesses participated in the study. Data was collected on 140 respondents of both the gender. Patients in the chronic illness group were having health problems mainly related with asthma, hypertension, diabetes, and coronary heart disease. Patients under non-chronic illness group were having very common health problems like common cold, irregular bowel syndrome or allergy etc. Patients suffering from any kind of terminal illness such as cancer, AIDS/ HIV, or degenerative neurological problems like dementia etc. were excluded from the study. Further, participants suffering from any type of physical abnormalities like blindness, skeletal-muscular abnormalities such as spolio and amputation of limb etc. were also excluded from the study. Age range of the patients was 25 to 65 years (mean age 48.50 years).

Instrument

Recovery from Illness Scale: Recovery from illness scale was developed to measure the illness recovery among people suffering from non-chronic and chronic (medically manageable) psychosomatic illness. This scales consisted of nine likert type items to be rated on four point scale viz. totally agree, somewhat agree, somewhat disagree and totally disagree. For positively worded items responses were coded as 3 for totally agree to 0 for totally disagree. Reverse scoring was done for negatively worded items. These items were framed to tap

the subjective experience in the improvement of physical illness, like "I experience quick recovery (in the symptoms)" (Srivastava, 2008).

Procedure

Participants of the study were approached either with the recommendation and consent of the concerned physician in out-patient door section of the hospitals or in the private clinics of the medical practitioners. Diagnosis was confirmed with the physician before administering the tool to ensure the inclusion/exclusion criteria. All the participants were currently not having any severe physical discomfort and were able to give their response on the scale. Participants were briefed about the purpose of the study. After taking their verbal consent scale was administered.

It was ensured that participants have given their response on all the items. Incomplete data sets were excluded from the analysis.

Statistical Analysis

Confirmatory Factor Analysis and Scale Reliability: Purpose of carrying the confirmatory factor analysis was twofold. First to ensure the unidimensionality of the construct, as one of the basic assumption of the Rasch analysis and second, ensuring the latent structure of the construct by investigating the data model fit and item loadings on the construct. Model fit indices of significance of $\chi^2 < .05$, χ^2/df (between 5 to 2), Goodness of fit index (GFI) $> .95$, incremental fit index (IFI) $> .95$, Tucker-Lewis Index (TLI) $> .90$, Comparative Fit Index (CFI) $> .95$ and root mean square error approximation (RMSEA) $< .05$ were used to judge model fit (Tanaka, 1993). Item loading was judged through standardized loading coefficients and significance level $< .05$. Inter item consistency (Cronbach's alpha) was computed to ensure the scale reliability.

Rasch Analysis

Rasch rating scale analysis was carried out by using "Bond & Fox Steps", a customized version of Winsteps (Bond & Fox, 2007).

Rasch Fit Statistics

Rasch fit statistics ensures the item fit with the Rasch model. There are two commonly used fit statistics which are the mean square (MNSQ) infit and outfit statistics. The mean square fit statistics has the chi-square distribution and has the expected value of one. The value of the infit and outfit can range from 0 to positive infinity. Infit and outfit mean squares are the squared values of the residuals of difference between the values observed and the value predicted by the model. MNSQ greater than one demonstrates over variation between the model and the observed values. For example, MNSQ of 1.4 indicate 40% over variation of noise than predicted by the Rasch model. Similarly, MNSQ value less than one demonstrate under variation. For example, MNSQ of .6 indicates

40% under variation or overlap in item score than predicted by the Rasch model (Bond & Fox, 2001).

The outfit MNSQ statistics is the average standardized unweighted residual variance across item and person, indicating that the estimate is more affected by unexpected responses. The infit MNSQ is the weighted residuals according to their individual variance to minimize the effect of unexpected response at distance from the measure. It is more influenced by the unexpected response closure to item or person measure (Bond & Fox, 2001). The t-value of infit and outfit MNSQ can be obtained by converting it to normalized t-statistics by using Wilson-Hilferty transformation. The t-statistics has expected value of 0 and standard deviation of unit. Value between -2 to $+2$ indicates acceptable item fit.

The infit and outfit statistics are the measures of internal validity of the response pattern (Linacre & Wright, 1994). It is the widely used statistic in applying Rasch analysis for the psychometric evaluation of the assessment tools. The ideal value is one to indicate best data-model fit. Wright, Linacre, Gustafson, and Martin-Lof (1994) have suggested the value of MNSQ falling in between 0.6 to 1.4 indicates good Rasch model fit. Whereas, Wolfe and Chiu (1999) suggest the value between 0.8 to 1.4. Taking a more stringent criterion, Mok, Cheong, Moore, and Kennedy (2006) suggested it between 0.7 to 1.3. Following the Mok et al. suggestion, MNSQ value between 0.7 to 1.3 has been used to judge the item data fit. Apart from the MNSQ, standardized fit value was also used. Standardized MNSQ value (t-value) has the normal distribution. Value between -2 to 2 indicates acceptable model-data fit (Bond & Fox, 2001). Bond & Fox step produce z-value equivalent to t-value.

Dimensionality

Unidimensionality assumption is related with the concept that only single underlying construct is responsible in the variation of the examinees' responses. Violation of this assumption can result in severe biases in item and person parameter estimations. Bond & Fox Steps (Winsteps) makes use of Principal Component Analysis (PCA) of Rasch residuals. In PCA of Rasch residuals, first of all item trait level is estimated and then the residual is analyzed for its meaningful structure. If data is closure to the Rasch measurement model, then residual factor loading will be smaller (Linacre, 2010). To ensure unidimensionality in the construct a cutoff value of 60% of the variance explained by the measurement and an eigenvalue of 3 or less and total percentage variance of 5 or less should be explained by first contrast of unexplained variance (Linacre, 2010).

Reliability

The Rasch measurement model provides two types of item and person reliability indices, *i.e.* separation index and reliability index. Separation index indicates the number of level into which item and person can be separated. The person reliability indicates that the sample would perform in same way on

another parallel set of items measuring the same latent trait (Wright & Masters, 1982). Person separation (G_p) > 1.0 indicates that the measurement is spread over a continuum with sufficient breadth in position. It is equivalent to cronbach's alpha. Item separation (G_i) > 1.0 indicates a broader spread in the latent trait measured by the items (Linacre, 2010).

RESULTS

Confirmatory factor with all the 9 items in the scale (Fig. 1a) resulted in unacceptable model fit as indicated by model fit indices, except of IFI (>.95) and CFI (>.95). Further to check the unidimensionality, model was re-tested with some of the correlated residual terms as indicated by the modification indices (Fig 1b). Correlated residual terms model resulted into good model fit. Item loadings obtained through both the correlated and uncorrelated residual term model were almost similar and significantly loaded ($p < .01$) except for Item 4. Item 4 showed almost nil loading in both the models and hence considered as misfit item. Results are summarized in table 1.

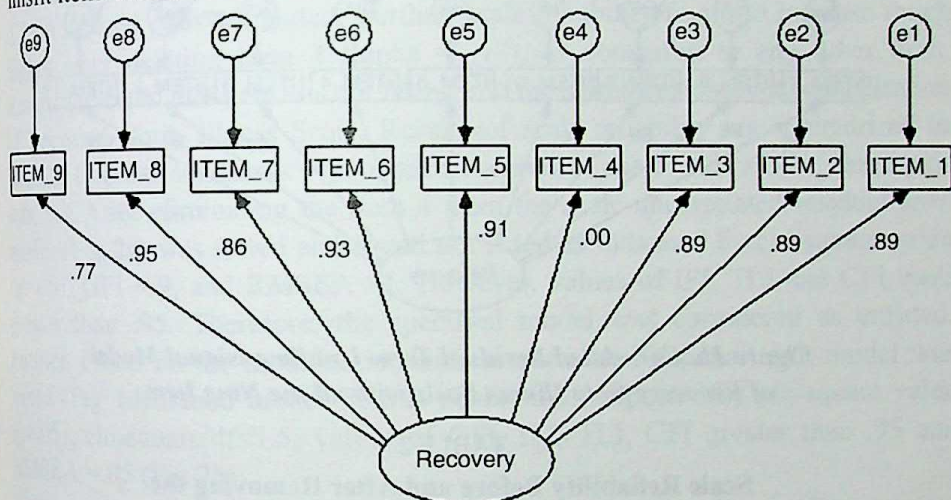


Figure 1a. Uncorrelated Residual Term Unidimensional Model of Recovery from Illness Scale with all the Nine Items.

TABLE 1

Model Fit Summary as Tested Before and After Fitting with CFA and Rasch Analyzed Model.

Model Fit Indices	With all the 9 items		After Removing Misfitted Item		After Fitting With the Rasch Rating Scale Model	
	Un-correlated Residual Term	Corre-lated Residual Term	Un-corre-lated Residual Term	Corre-lated Residual Term	Un-corre-lated Residual Term	Corre-lated Residual Term

Contd. table 1...

Contd. table 1...

Chi-Sq	84.790*	27.032	74.247*	20.732	23.563*	9.087
Chi-Sq/df	3.14	1.287	3.712	1.382	2.618	1.298
GFI	0.895	0.961	0.893	0.967	.952	.980
IFI	0.959	0.996	0.962	0.996	.985	.998
TLI	0.945	0.993	0.946	0.992	.974	.995
CFI	0.959	0.996	0.962	0.996	.985	.998
RMSEA	0.122	0.045	0.137	0.052	.106	.046*

p<.05

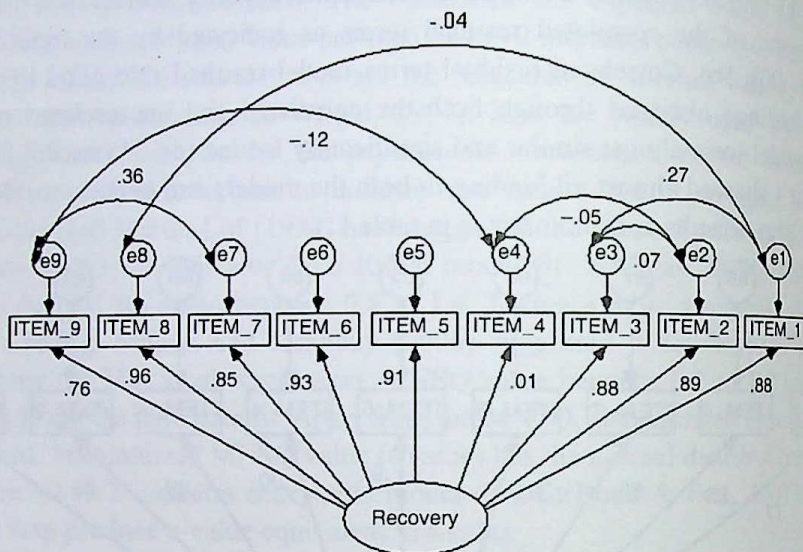


Figure 1b. Correlated Residual Term Unidimensional Model of Recovery from Illness Scale with all the Nine Items.

TABLE 2

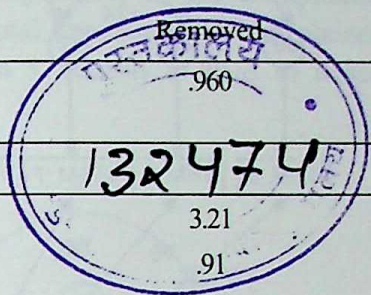
Scale Reliability Before and After Removing the Misfitted Items in CFA and Rasch Analysis.

Item No	Scale Reliability (Alpha If Item Deleted)		
	With all the 9 items	After Removing Misfitted Item	After Fitting With the Rasch Rating Scale Model
1	0.917	0.961	.951
2	0.919	0.962	.951
3	0.918	0.962	.952
4	0.966	Removed	Removed
5	0.918	0.961	.951
6	0.916	0.960	.950

Contd. table 2...

Contd. table 2...

	0.918	0.962	.955
7	0.913	0.960	Removed
8	0.925	0.968	Removed
9	0.933	0.966	.960
Total Scale Reliability			
Rasch Reliability			
Person Separation	—	3.22	3.21
Person Reliability	—	.91	.91
Item Separation	—	1.13	1.30
Item Reliability	—	.65	.63



However, since there is no theoretical assumption for the relationship in the residual terms related with the construct, cronbach's alpha and scale reliability, if item deleted, was computed. Further, scale reliability found to increase much higher after deleting Item 4 (alpha = .97), as compared to any other item. Results indicated that Item 4 is not fitting into the unidimensional conceptualization of Recovery from Illness Scale. Results of scale reliability are summarized in table 2. Internal consistency (cronbach's alpha) of scale with all the nine items was .93. After eliminating the item 4 from the scale uncorrelated residual term model (Fig 2a) was tested and found not fitted as indicated by chi-square value ($p > .05$), GFI $< .9$, and RMSEA $> .1$. However, values of IFI, TLI and CFI were greater than .95. Therefore, the specified model was considered as unfitted. Further, based on the modification indices correlated residual term model was tested (Fig 1d). Good model fit was obtained as indicated by chi-square value ($p > .05$), chi-square/df < 1.5 , values of GFI, IFI, TLI, CFI greater than .95 and RMSEA = .05 (Fig 2b).

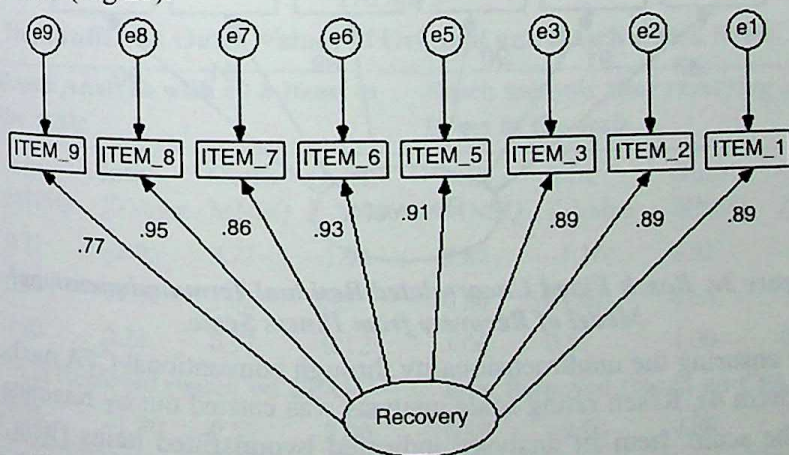


Figure 2a. Uncorrelated Residual Term Unidimensional Model of Recovery from Illness Scale after Removing Item 4.

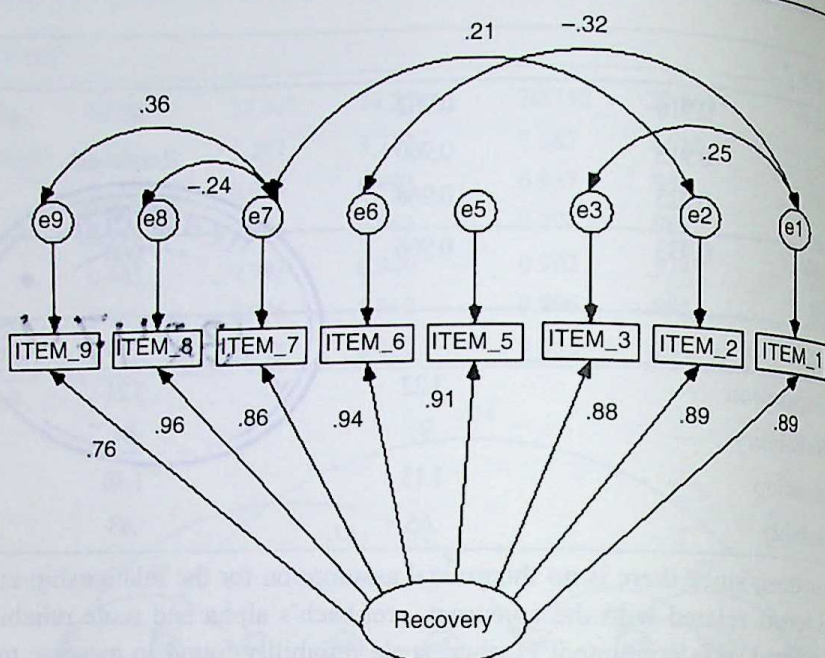


Figure 2b. Correlated Residual Term Unidimensional Model of Recovery from Illness Scale after Removing Item 4.

Although, in both the models (Fig. 2a and Fig 2b), item loadings of all items were significantly loaded ($p < .05$) and were almost similar. Item loadings in both the models were higher than .85 except for Item 9, which was again within acceptable range ($> .7$).

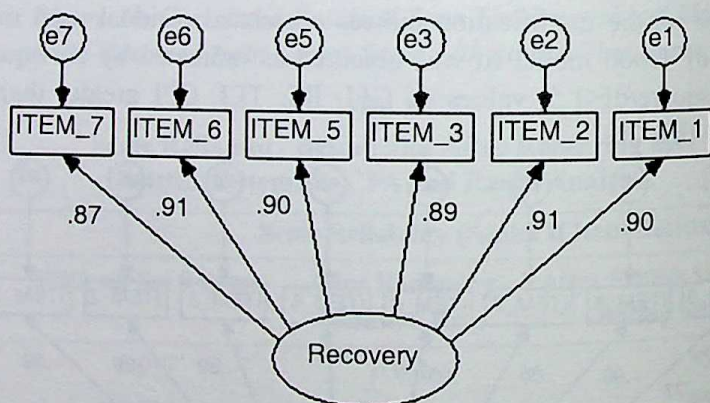


Figure 3a. Rasch Fitted Uncorrelated Residual Term unidimensional Model of Recovery from Illness Scale.

After ensuring the unidimensionality through conventional CFA method (by removing Item 4), Rasch rating scale analysis was carried out by retaining eight items in the scale. Item fit analyses indicated two misfitted items (Item 7 and Item 8) as evident through the infit and outfit MNSQ values > 1.3 or $< .7$ and z -

values $> \pm 2$. Results of Rasch item fit statistics are summarized in table 3. Although, the PCA of Rasch residual analysis indicated towards the unidimensional nature of the data as indicated through eigenvalue of the total variance explained by the measure is greater than 60% and the eigenvalue of the unexplained variance in the first contrast is less than 3. Total percentage of unexplained variance in the first contrast was also less than 5. Results of PCA of Rasch residuals are summarized in table 4.

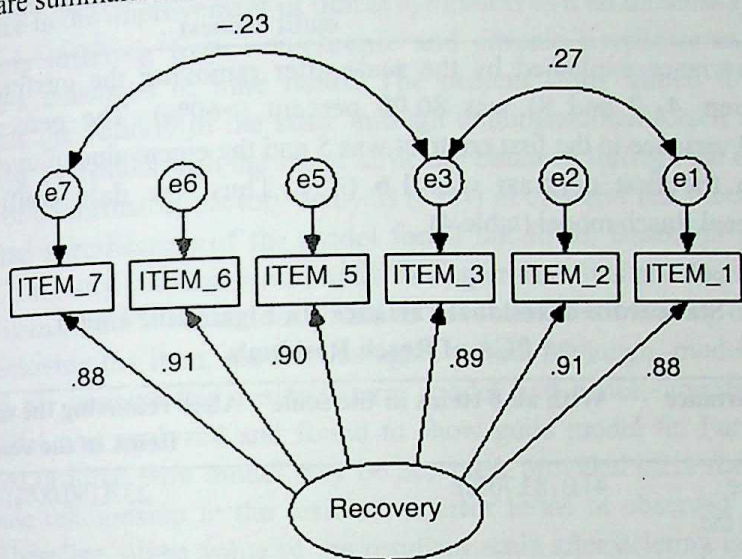


Figure 3b. Rasch Fitted Correlated Residual Term Unidimensional Model of Recovery from Illness Scale.

The most misfitted items, i.e. item number 7 and 8 were excluded from the scale. Scale was again re-analyzed with the remaining 6 items. All the remaining items, after excluding items 7 and 8, found within acceptable range of fit values (MNSQ ranged from .7 to 1.3 and z value between -2 to 2) (table 3).

TABLE 3

Item Infit and Outfit Values of Original and Rasch Fitted Scale.

Item No.	Rasch Analysis with all 8 Items in the scale				Rasch analysis after removing misfitted Items in the scale			
	Infit MNSQ	Infit Z-Value	Outfit MNSQ	Outfit Z-Value	Infit MNSQ	Infit Z-Value	Outfit MNSQ	Outfit Z-Value
1	0.77	-2.05	0.77	-1.94	0.87	-1.16	0.92	-0.63
2	0.84	-1.23	1.02	0.15	0.80	-1.61	0.88	-0.77
3	1.02	0.22	0.97	-0.12	1.06	0.51	1.00	0.03
4	Item Removed (based on CFA)				Item Removed (based on CFA)			
5	0.76	-1.80	0.69	-2.00	0.88	-0.90	0.86	-0.90

Contd. table 3...

Contd. table 3...

6	0.85	-1.15	0.83	-1.13	1.00	0.01	1.03	0.24
7	1.11	0.83	1.01	0.15	1.28	2.01	1.24	1.57
8	0.63	-3.14	0.59	-3.00	Item Removed (based on infit and outfit values)			
9	1.88	5.74	2.01	5.85	Item Removed (based on infit and outfit values)			

Total variance explained by the scale after removing the misfitted items (item numbers 4, 7 and 8) was 80.00 percent ($>60\%$). The percentage of unexplained variance in the first contrast was 5 and the eigenvalue of unexplained variance in the first contrast was 1.6 (<3). Thus, the data confirms the unidimensional Rasch model (table 4).

TABLE 4
**Standardized Residual Variance (In Eigenvalue Units)
 of PCA of Rasch Residuals.**

Source of Variance	With all 8 Items in the scale	After removing the misfitted items in the scale
Total Variance	41.0 (83.70%)	23.4 (80.00%)
Explained by the Measures		
Unexplained Variance	8.0 (16.30%)	6.0 (20.00%)
Unexplained variance in 1 st contrast	1.9 (3.90%)	1.6 (5.00%)

Psychometric properties of the resultant scale after Rasch analysis were re-investigated to compare it with the original conceptualization of the scale. Unacceptable fit was found for un-correlated residual term model as indicated though only chi-square value ($p < .05$) and RMSEA $> .1$. Apart from these indices, values of GFI, IFI, TLI and CFI were all higher than .95. Thus, model may be considered as marginally fit with the data. However, as compared to other uncorrelated residual term model, the Rasch fitted model was found to demonstrate relatively higher fit with the data. Moreover, based on modification indices, correlated residual term model was tested and found well fitted with the data (table 1).

Alpha, if item deleted, found similar for all the items and ranged between .95 to .96. Internal item consistency in the scale (cronbach's alpha) was .96 which is almost similar to the non-Rasch fitted scale but was much higher than the original 9-item scale (table 2). Rasch fitted scale resulted into improved

psychometric properties as indicated through item and person separation index and reliability. Person separation index and reliability of both the (8-item scale and Rasch fitted) scale were similar, whereas, the item reliability was found to improve in the Rasch fitted scale (table 2).

DISCUSSION

Recovery form illness scale was constructed to measure the subjective experience in the improvement of illness symptoms as a unidimensional construct in patients suffering from non-chronic and chronic psychosomatic illnesses. This scale consisted of nine items. The present study aimed to further re-investigate the validity of the scale through unidimensional Rasch analysis and comparing the results with the factor structure obtained through the conventional method of confirmatory factory analysis (CFA) in classical test theory.

Initial specification of the model found not fitted. Based on modification indices, correlated residual term model was again re-tested and found fitted. Out of nine items, item number four found to have almost nil loading on the factor. After removing the item, model was again tested. Although, model fit was not obtained for uncorrelated residual term model and hence, correlated residual term model was analyzed and found to show good model fit. Further, since a correlated residual term model may be accepted, provided there should not be a systematic relationship in the residual or error terms of observed variable, *i.e.* items. Therefore, alpha value of the resultant scale after deleting each item was calculated to ensure no significant change in the alpha value after deleting each item. Results indicated almost unchanged alpha value with very minute variations ($<.007$) in the resultant scale with eight items. Overall alpha value of scale (.966) indicates very good scale reliability.

After determining the unidimensionality in the scale and removing the misfit item, scale with the remaining eight items was subjected to Rasch analysis. Rasch data-model fit was investigated through item fit statistics (MNSQ and z-value) and principal component analysis (PCA) of Rasch residuals to investigate the single latent trait explaining the variance in the observed responses. Item fit statistic revealed two of the items (item 7 and 8) were not fit with the Rasch model. PCA of Rasch residual, indicated sufficient unidimensionality in the data set. Although, based on the item fit statistic, the misfit items were removed from the scale. Scale was again analyzed further to ensure the data-model fit. Rasch analysis with the resultant scale of 6 items (after removing items 4, 8 and 9) found to be fitted with the Rasch model. All items found well fitted, as indicated through infit and outfit MNSQ and z-values. PCA of Rasch residual also showed sufficient unidimensionality in the data.

Rasch fitted model was again re-analyzed through CFA to compare the model fit and item loadings with the non-Rasch fitted model. Results revealed relatively better fit in the model (uncorrelated residual terms) as compare to non-

Rasch fitted model, as indicated by chi-square/df, GFI, IFI, TLI, CFI and RMSEA value was also very close to marginally accepted fit value. Even though possibility was further explored by testing correlated residual term model obtained through Rasch analysis. Model fit of the correlated residual term model found to improve, as indicated through all the model fit indices taken into the consideration. Very slight variations (.008 to .01) in the scale reliability (alpha value) of Rasch fitted and non-Rasch fitted model was found. Thus, the Rasch analysis found to detect more misfitted item as compare to conventional CFA method.

Generally, the concept of recovery from illness has been primarily investigated in the field of psychiatric mental health. Most of the recovery related scales are multi-dimensional. For example, Recovery Assessment Scale consisted of 24 items and divided into five sub-scales (Gifford, Schmuck, Woody, Vollendorf, & Gervain, 1995). Crisis Hostel Healing Scale developed by Dumont (2000) contains 40 items measuring 10 related domains. Personal Vision of Recovery Questionnaire (PVRQ) developed by Ensfield (1998) as a multi-dimension measure of recovery assesses belief about own recovery including social support, personal challenges, professional assistance, action and help-seeking.

Similarly, Mental Health Recovery Measures (Young, Ensing, & Bullock, 1999), and Recovery attitude Questionnaire (Steffen, Borkin, Krzton, Wishnick, & Wilder, 1999) etc. are multidimensional measures. Recovery is a complex and insight full concept in understanding the response to a particular disease and its interaction with the treatment. Recovery can be explained in two ways. First, entirely based on the bio-medical model emphasizing on the reduction or complete absence of symptoms at physiological level.

Second, at the level of individual's attitude and motivation and his subjective appraisal in a positive and adaptive manner to recover from illness and discomfort. Recovery is widely explored in the realm of mental illnesses and has been established as multi-dimensional construct. But, almost it is an unexplored concept in the context of physical health problems. Further, the tools available to measure recovery from mental illness cannot be applied for measuring recovery from physical illness, as the nature, symptoms, etiology and process of psychological adaptation to these two class of illnesses are very different.

In physical health care services, quick, reliable and interpretable assessment of treatment effectiveness is required. Particularly, in case of chronic and severe illnesses, course and direction of treatment depends on the primary diagnosis and patients' response to the medication. However, apart from the physiological conditions and bio-medical treatments, patients' psychological state also determines the treatment effectiveness and therefore, needs to be taken into consideration while deciding about the treatment. In this context, subjective evaluation of recovery from the illness can be an important indicator for taking an early

decision about the treatment methods and medication. Recovery from illness scale was constructed as a unidimensional measure to evaluate the subjective experience of improvement in physical health symptoms.

Another issue related with the meaningfulness in the assessment or recovery or in general to any psychometric measurement is to have a measurement tool based on interval scale. Interval scale has its inherited properties to provide meaningful measures (Wright & Linacre, 1989). Traditional analysis methods based on CTT are based on true score theory which makes use of only ordering without any proportional meaning. This issue is best dealt by Rasch approach of measurement construction. Rasch measurement transform the ordinal data into logit scale. Logit scale has constant linear interval meaning and can be used for meaningful and objective interpretation of the ordered category responses (Linacre, 2010). Findings of this study also indicated improvement in the psychometric properties after Rasch analysis, as two of the misfitted items could not be detected through CFA. By applying CFA to test the priori factor structure does not necessarily ensure expected explanation of the model with the data in hand. If this is the case, generally model is re-specified. A model specified of one sample or population does not necessarily hold the same structure for another sample. This leads to the issue of measurement invariance and fitting the model with the data (Linacre, 2003). However, on the contrary, Rasch model is a stringent model and data is required to fit with the assumptions of the model (Yen & Bond, 2011; Bond & Fox, 2007). Therefore, to establish construct validity as a unidimensional measure, Rasch measurement can be an appropriate way to test the proposed model. Since, Rasch item and person parameters are estimated separately and they are independent of each other, measurement invariance can be achieved and it is one of the essential assumptions of the Rasch measurement construction.

In conclusion, the present study aimed to investigate the psychometric properties of the recovery from illness scale in the mixed population suffering from various psychosomatic illnesses as a global and disease independent measure of treatment outcome. To investigate the factor structure and construct validity, CFA and Rasch analysis was applied. Rasch analysis indicated the unidimensionality in the data set, which was cross confirmed by CFA. Although, Rasch analysis (item fit MNSQ) resulted in relatively more precise assessment of item fit in the scale and was able to detect misfitted items which was not evident through CFA.

Further studies can be carried out by including patients suffering from certain specific disease and after controlling the disease specific factors IRT analysis can be carried out to confirm the factor structure of the scale.

REFERENCES

- Anastasi, A., & Urbina, S. (2002). *Psychological testing*. New York: Prentice Hall.
- Anthony, W.A. (1993). Recovery from mental illness: The guiding vision of the mental health service system in the 1990s. *Psychosocial Rehabilitation Journal*, 16, 11-23.
- Bond, T.G., & Fox, C.M. (2001). *Applying The Rasch Model: Fundamental Measurement in The Human Sciences*. London: Lawrence Erlbaum Associates.
- Bond, T.G., & Fox, C.M. (2007). *Applying the Rasch Model. Fundamental Measurement in the Human Sciences* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Davidson, N. (2003). *Living Outside Mental Illness: Qualitative Studies of Recovery in Schizophrenia*. New York: New York University Press.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542-575.
- Diener, E., Suh, E. N., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276-302.
- Dumont, J. (2000). Crisis hostel project healing measure. In R. Ralph, K. Kidder, & D. Phillips (Eds.), *Can we measure recovery? A compendium of recovery and recovery-related instruments*. Cambridge, MA: Human Services Research Institute.
- Embretson, S. E., & Reise, S. P. (2000). *Item Response Theory for Psychologists*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Ensfield, L. B. (1998). *The personal vision of recovery questionnaire: The development of a consumer-derived scale*. Cincinnati, OH: University of Cincinnati.
- Fan, X. (1998). Item response theory and classical test theory: An empirical comparison of their item/person parameters. *Educational and Psychological Measurement*, 58, 357-381.
- Fox, C., & Jones, J. (1998). Uses of Rasch modeling in counseling psychology research. *Journal of Counseling Psychology*, 45(1), 30-45.
- Giffort, D., Schmook, A., Woody, C., Vollendorf, C., & Gervain, M. (1995). *Construction of a scale to measure consumer recovery*. Springfield, IL: Illinois Office of Mental Health.
- Guyatt, G. H., Feeny, D. H., & Patrick, D. L. (1993). Measuring health-related quality of life. *Annals of Internal Medicine*, 118, 622-628.
- Hambleton, R. K., & Swaminathan, H. (1985). *Item Response Theory: Principles and Applications*. USA: Kluwer-Nijhoff Publishing.
- Hambleton, R.K., Swaminathan, H., & Rogers, H. J. (1991). *Fundamentals of item response theory*. New York: Sage publications.
- Hopper, K. (2004). Interrogating the meaning of 'culture' in WHO international studies of schizophrenia. In J. H. Jenkins, & R. J. Barrett, *Schizophrenia, Culture, and Subjectivity: The Edge of Experience*. New York: Cambridge University Press.
- Kamalski, D. M., Hoekstra, C. E., van Zanten, B. G., Grolman, W., & Rovers, M. M. (2010). Measuring disease-specific health-related quality of life to evaluate treatment outcomes in tinnitus patients: A systematic review. *Otolaryngology - Head and Neck Surgery*, 143(2), 181-185.
- Linacre, J. M. (2003). Rasch Power Analysis: Size vs. Significance: Standardized Chi-Square Fit Statistic. *Rasch Measurement Transactions*, 1(17), 918.

- Linacre, J. M. (2010). *A users guide to Winsteps Rasch model computer program: Program Manual 3.70*. Chicago: Winsteps.
- Linacre, J. M., & Wright, B. D. (1994). (Dichotomous Mean-Square) Chi-Square fit statistics. *Rasch Measurement Transactions*, 8(2), 360.
- Meddings, S., & Perkins, R. (2002). What 'getting better' means to staff and users of a rehabilitation service: an exploratory study. *Journal of Mental Health*, 11, 319-325.
- Mok, M. M., Cheong, C. Y., Moore, P. J., & Kennedy, K. J. (2006). The development and validation of the Self-directed Learning Scales (SLS). *Journal of Applied Measurement*, 7(4), 418-449.
- Mueser, K. T., & Gingerich, S. (2005). Illness Management and Recovery (IMR) Scales. In T. Campbell-Orde, J. Chamberlin, & J. Carpenter (Eds.), *Measuring the Promise: A Compendium of Recovery Measures* (Vol. 2). Cambridge: Mass achusetts, Human Services Research Institute, Evaluation Center.
- Ramp, M., Khan, F., Misajon, R. A., & Pallant, J. F. (2009). Rasch analysis of the Multiple Sclerosis Impact Scale (MSIS-29). *Health and Quality of Life Outcomes*, 7, 58.
- Rasch, G. (1960/1980). *Probabilistic models for some intelligence and attainment tests*. Copenhagen: Danish Institute for Educational Research, 1960. Expanded edition. Chicago: The University of Chicago Press.
- Ridgway, P. (2001). Re-storying psychiatric disability: Learning from first person narrative accounts of recovery. *Psychiatric Rehabilitation Journal*, 24(4), 335-343.
- Ridgway, P., & Press, A. (2004). *Assessing the recovery-orientation of your mental health program: A user's guide for the Recovery-Enhancing Environment scale (REE). Version 1*. Lawrence, Kansas: University of Kansas, School of Social Welfare, Office of Mental Health Training and Research.
- Shepherd, G., Boardman, J., & Slade, M. (2008). *Making recovery a reality*. London: Sainsbury Centre for Mental Health.
- Srivastava, A. K. (2008). *Recovery from Illness Scale*. Department of Psychology, Banaras Hindu University: Unpublished.
- Steffen, J. J., Borkin, J. R., Krzton, K., Wishnick, H., & Wilder, K. E. (1999). *Consumer, family member, mental health professional, and student versions of the Recovery Attitudes Questionnaire*. Cincinnati: Hamilton County Recovery Initiative Research Team, University of Cincinnati.
- Tanaka, J. (1993). Multifaceted conceptions of fit in structural equation models. In K. A. Bollen, & J. S. Long, *Testing structural equation models*. Newbury Park, CA: Sage.
- Warner, R. (1994). *Recovery from Schizophrenia*. New York: Routledge.
- WHO. (1979). *Schizophrenia: an International Follow-up Study*. World Health Organization. Chichester: John Wiley and Sons.
- Wolfe, E. W., & Chiu, C. W. (1999). Measuring change across multiple occasions using the Rasch Rating Scale Model. *Journal of Outcome Measurement*, 3, 360-381.
- Wright, B. D. (1992). Which Models Work Best? *Rasch Measurement Transaction*, 6(1), 196-200.

- Wright, B. D., & Linacre, J. M. (1989). Observations are always ordinal; measurements, however, must be interval. *Archives of Physical Medicine and Rehabilitation*, 70, 587-860.
- Wright, B. D., & Masters, G. N. (1982). *Rating scale analysis*. Chicago: MESA Press.
- Wright, B. D., & Stone, M. H. (1979). *Best Test Design*. Chicago, ILL: MESA Press.
- Wright, B. D., Linacre, J. M., Gustafson, J. E., & Martin-Lof, P. (1994). Reasonable mean-square fit values. *Rasch Measurement Transactions*, 8(3), 370.
- Yen, Z., & Bond, T. (2011). Developing a Rasch measurement physical fitness scale for Hong Kong primary school-aged students. *Measurement in Physical Education and Exercise Science*, 15(3), 182-203.
- Young, S. L., Ensing, D. S., & Bullock, W. (1999). *The Mental Health Recovery Measure*. Toledo, OH: University of Toledo, Department of Psychology.

STRESS, SELF REGULATION AND PSYCHOLOGICAL WELLBEING AMONG YOUTH

Suneesh M.S. , Hridya V.M.** and Sukanya. B. Menon****

ABSTRACT

In the current era youth is the strongest population from which there is an expectation of great productivity. So understanding the stress and how they regulate themselves in order to maintain well-being is very much in need. The present study is aimed at knowing the stress, self-regulation and psychological well-being among the college students. One hundred and forty four sample of college students were selected for the study. Perceived stress scale, self-regulation questionnaire, Psychological general well-being schedule were used for the assessing Perceived stress, Self-regulation and Psychological well-being respectively. Correlation and analysis of variance, Duncun's Multiple Range Test and Independent sample T test were conducted. Stress has a negative relationship with self-regulation and Psychological wellbeing and Psychological wellbeing has a positive association with self-regulation. Females are found to have high perceived stress and self-regulation compared to male counterparts. A significant difference is also found for perceived stress and Psychological wellbeing among youth who were grouped on the basis of low, intermediate and high self-regulation. Thus reduction in stress and enhanced self-regulatory activities provide a better psychological wellbeing among youth.

Key words: Stress, self-regulation, and well-being, youth

INTRODUCTION

Now a day's youth, mainly college students have to face variety of stressors, which may negatively affect their mental health. Stress can be explained as an

* Student BSc Psychology, Department of Psychology, PrajyotiNiketan College, Pudukad.sunimonsuresh@gmail.com9544015998

** Student MSc Clinical Psychology, Department of Psychology, PrajyotiNiketan College, Pudukad.hridyavm99@gmail.com 9446423874

***Assistant Professor, Department of Psychology, PrajyotiNiketan College, Pudukad.sukanyabmenon@gmail.com9495422530

negative cognitive and emotional state which is elicited when the person realizes that the demand placed on the person by the environment exceed the ability to cope (Lazarus and Folkman, 1984) and this stress is generally differentiated in to time stress, feeling of stress and physiological stress. Even if an optimal amount of stress is needed in a person's life (Selye, 1956) for a better performance, increased amount of stress leads to psychological distress and medical problems. Students with high level of stress had greater depressed affect compared to students with less stress (Robbins & Tanck 1992). It was suggested that life events has a greater influence on one's psychological status as it was considered that the major risk factor for depression is the life stressors (Mazure, 1998).

Increased work load, new responsibilities, changes in eating and sleeping habits are some of the sources of stress among college students (Ross, Niebling-Heckert, 1999). Experience of stress also causes a breakdown of self-regulation as it depletes the capacity of an individual to regulate the self. In a broad way self-regulation can be explained as any regulation of self by the self, that is the usage of psychological capacity in order to make certain psychological processes like motivational, behavioral or attention processes into desired direction (Vohs & Baumeister, 2004). In self-regulation, assignment of standards, that is, ideals, goals, or other conceptions of possible states and the constant monitoring of one's action are the most important aspects to be considered. When it is seen that the current state falls short of the standards, the person should have enough strength to override the responses they wish to control (Baumeister and Heatherton, 1996).

Considering the stress and self-regulation among youth, another important component which has an influencing role on youth is their well-being. Individuals who are more stressed or rushed scored less in happiness and life satisfaction which were the measure of subjective well-being (Robinson and Godbey 1998; Shields 1999). Well-being has a cognitive and affective component. Affective component signifies the balance between positive and negative emotional states and the cognitive component signifies the overall evaluation of the individual about the various domains in their life and the experience they encounter (Kafka & Kozma, 2001). The basic aspects of well-being are positive and negative affect and life satisfaction and thus the well-being is measured in terms of general satisfaction with life, self-perceived health, and satisfaction with services and resources offered (Beekman, Penninx, Deeg, de Beurs, Geerlings, & Tilburg, 2002). While controlling certain personality dispositions, global subjective well-being is relatively stable even if there is variation in emotional states, producing good or bad days depending upon the events happening on an individual's life (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000).

Study shows that self-regulatory processes are also linked to youth depression (Scott, Dearing, and Reynolds, 2008). The two major components

of self-regulation such as self-efficacy appraisal, that is perceived self-efficacy to produce desired performances, and goal representation which is the mental representations of desired or undesired future states that helps an individual to move towards this imagined state are the major processes that are related to depression and wellbeing (Bandura, 1997).

Under the above background a study was conducted in youth to understand whether there is any relationship exists among perceived stress, self-regulation and psychological well-being. It aims to investigate whether stress and psychological wellbeing differs in people who have high, intermediate and low self-regulation. This study also aimed at knowing whether these aspects differ in male and female youth.

METHOD

Participants

The sample studied were students of various colleges in Trissur district who are studying graduation or post-graduation. 144 college students were selected using random sampling and interviewed. The age of samples ranged between 18 and 22. Students who were physically challenged were excluded from the study.

Procedure

All the respondents who consented to participate in this study were briefed about the purpose of the study. Each respondent were then provided with three questionnaires (Perceived stress scale, Self-regulation Questionnaire and Psychological general wellbeing schedule) and persuaded to fill by their own.

Measures Used

1. **Perceived Stress Scale:** This 10 item perceived stress scale (PSS-10) developed by Cohen and Williamson (1988) is the most widely used psychological instrument for measuring the perception of stress. Items are designed to tap how unpredictable, uncontrollable and overloaded the respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress. This is a five point likert scale, in which zero indicates "Never" to four indicating "Very often". Internal reliability of this scale is 0.78. Questions are of a general nature and hence are relatively free of content specific to any sub population group.
2. **Psychological General Well-being Schedule:** The Psychological General Well-being Schedule developed for the National Centre for Health Statistics by Dupuyin 1984 assesses how the individual feels about his "inner personal state". The respondent was asked to indicate how he feels and how things have been going with him during the past

one month. The scale has 22-items that are aggregated to provide scores in six sub scales such as Anxiety, Depressed mood, Positive well-being, Self-control, General health and Vitality. This is a six-point scale ranging from 0 to 5. Their test-retest reliability coefficient after three months range between 0.68 to 0.85 and with an internal consistency of 0.95. The correlational validity of the scale is very high and the values have been reported to range from 0.65 to 0.90.

3. **Self - Regulation Questionnaire:** The seven step model self-regulation questionnaire was developed by Miller and Brown in 1991 to measure the ability to develop, implement, and flexibly maintain planned behaviour in order to achieve one's goals. All 63 items are answered on a 5-point likert scale with the scale points-Strongly disagree (1), Disagree (2), Uncertain, Agree & Strongly. The items that are to be reverse-scaled are given (R). For reverse-scaled items 1 = 5, 2 = 4, 3 = 3, 4 = 2 and 5 = 1. The test retest reliability is 0.94. The SRQ also has shown strong convergent validity. If the total score is greater than or equal to 239, subject has high self-regulation capacity, if it is between 238 and 214, subject has intermediate self-regulation capacity, if it is less than 213 subject has low self-regulation capacity.

Statistical Analysis

Pearson correlation coefficient was carried out to identify the association among Perceived stress, self-regulation and Psychological wellbeing. Independent sample T test was done in order to understand whether there is any significant difference in Perceived stress, self-regulation and Psychological well-being among youth who were grouped on the basis of gender. The youth were again grouped into three based on scores of self-regulation. Likewise youth were grouped as those having low, intermediate and high self-regulation. Analysis of variance and Duncun's Multiple Range Test (DMRT) was carried out following Cohen (1988) for elucidating the level of Perceived stress and Psychological wellbeing among the three groups and to evaluate the impact of self-regulation on perceived stress and psychological wellbeing among youth. All statistical analysis was carried out using SPSS ver. 17.0 for Windows.

RESULTS

The correlation between Psychological wellbeing and Perceived stress among youth is shown in Table 1. There exists a negative correlation ($r = -0.651$, $p < 0.001$) between perceived stress and Psychological wellbeing. Another noteworthy observation of the study was a significant negative correlation between Perceived stress and sub variables of Psychological wellbeing such as anxiety ($r = -0.517$, $P < 0.001$), Depressed mood ($r = -0.576$, $P < 0.001$) (increase in the score for anxiety and depressed mood indicates reduction in anxiety and depressed mood).

Positive wellbeing ($r = -0.542$, $P < 0.001$) Self-control ($r = -0.493$, $P < 0.001$) General health ($r = -0.411$, $P < 0.001$) and Vitality ($r = -0.508$, $P < 0.001$). Thus when there is an increase in Perceived stress, a reasonable reduction is seen in Psychological wellbeing. Stress also produce an increment in anxiety, depressed mood and a lessening of self-control, general health, vitality and positive wellbeing.

Table 2 shows that self-regulation has a significant positive correlation ($P < 0.01$) with sub variables of Psychological well-being like anxiety ($r = 0.261$), Depressed mood ($r = 0.406^{**}$), Positive well-being ($r = 0.261$), Self-control ($r = 0.323$), General health ($r = 0.398$), Vitality ($r = 0.342$) and overall Psychological wellbeing ($r = 0.419$).

Self-regulation and Perceived stress ($r = -0.321$, $P < 0.01$) are also negatively correlated which is depicted in Table 3. Thus it can be said that as there is an increase in self-regulation there is a decrease in perceived stress and an increase in psychological wellbeing.

From table 4, it is evident that Perceived stress is greater ($P < 0.05$) in female ($M = 17.32$) youth compared to males ($M = 14.96$). Even if there is a greater amount of perceived stress in females, it can be also seen that self-regulation is more in females ($M = 219.77$) compared to males ($M = 207.32$), ($P < 0.001$).

Comparison of mean values for different degree of self-regulation among youth following one-way ANOVA is depicted in Table 5. Results indicate significant ($P < 0.001$) variation in the levels of Perceived stress ($F = 8.373$) and Psychological wellbeing ($F = 20.255$) among youth who differed in the level of self-regulation. Results further confirm that with varying degree of self-regulation the resultant stress levels and Psychological wellbeing vary considerably. While comparing the mean values Perceived stress and Psychological well-being among the three self-regulation groups following DMRT, it was evident that youth who have low self-regulation ($M = 19.0164$) significantly differed from others in terms of Perceived stress and the youth who has lower self-regulation ($M = 61.295$) differed significantly from high ($M = 70.9444$) and intermediate group ($M = 75.5455$) on psychological wellbeing (Table 6). Hence it could reasonably be concluded that Perceived stress and Psychological wellbeing, are directly influenced by the level of self-regulation among youth.

DISCUSSION

Today youth is exposed to greater level of demands made by the society which inturn produce a considerable amount of stress in them. So it is necessary to understand the perceived stress, self-regulation and psychological well-being among these individuals. In the present study investigators tried to identify the relationship among these variables. Study also attempted to understand the influence of self-regulation on perceived stress and psychological well-being

among youth and to know the difference in these variable among youth who were grouped on the basis of gender.

From the results it is evident that perceived stress, self-regulation and psychological well-being are related. In the present findings perceived stress is negatively related to positive wellbeing, self-control, vitality, and general health and negatively related to anxiety and depression. Another study also shows consistent findings. High stress level also pave way for depressed affect among college students (Robbins, & Tanck, 1992; Mazure 1998) which further influence the psychological wellbeing. Happiness is one of the major concepts related to positive well-being. Omid, Akbari, and Mahdian, (2011) emphasis that the proportion of students reporting high level of happiness, that is "very happy" also stated absence or few stress in normal situations and during tests circumstances. In a study conducted among university students, perceived stress was associated to increased levels of depression and anxiety and decreased satisfaction with life (Asberg, 2000).

From the study of Glass, Singer, and Friedman (1969), it is evident that stress worsen an individual's ability to regulate one's self. The causal factors for the deterioration of self-regulation while under stress are enough to be explained. In the face of frustration it is difficult to concentrate on effortful task such as self-regulatory activities as it consumed so much of psychic energy which is in need for self-regulation. When the stressors are highly available in the memory and not seen in the immediate situation, person try to distract from the upsetting thoughts of it by indulging in compelling short term stimuli which unfortunately be the things the person try to control most of the time. There is high chance of failure when the person set high standards for them. This usually happens when goal setting takes place under the pressure of inflated egotism and emotional distress (Glass, Singer, and Friedman, 1969). Thus in the present study there found not only a negative relationship of stress and self-regulation but also found that low self-regulated individuals have significantly high perceived stress compared to high and intermediate group.

A direct positive relationship was also examined between self-regulation and psychological well-being. Rather than this relationship there found a direct influence of self-regulation on psychological wellbeing as it was found that for persons with low self-regulation the wellbeing is found to be less compared to people with intermediate and high self-regulation. The major components of self-regulation, such as self-efficacy and goal representation are having a direct association with depression and wellbeing. These two self-regulatory processes are found to have a reciprocal influence.

Depression also comes when individual has decreased sense of self efficacy which is needed for the performance of actions necessary for the realization of valued goals. And when people confused about their abilities they become less

perinent to invest personally in their goals (Bandura, 1997). Youth depression levels are either directly or indirectly influenced by the self-efficacy for academic performances and social interactions (Bandura, Pastorelli, Barbaranelli, and Caprara 1999) which inturn effect the wellbeing of the particular person. Thus Self-efficacy to control positive and negative affect is helps in high efficacy to manage one's academic development, to resist social pressures for antisocial activities, and to engage oneself with empathy in others' emotional experiences.

In the present study, while considering the gender difference in the perceived stress, female youth were found to have more perceived stress compared to male youth. The results are consistent with previous studies. When faced with identical stressors, females perceive their stress as being higher compared to males (Day & Livingstone, 2003). Hamaideh, (2012) also argues that female students reported a higher perception of stressors in frustrations, conflict, pressures and changes, as well as emotional reactions to stressors

Even if the perceived global stress is greater in female students, no gender difference is seen in overall life satisfaction (cognitive aspect of wellbeing), (Asberg, 2000) which is similar to the present findings that the psychological well-being among male and female youth are similar. Considering the self-regulation among girls and boys, it was found that more self-regulation is seen in girls. Results matches with the observation of Bouffard', Boisvert, Vezeau and Larouche (2011) that more self-regulatory strategies used in learning is by females compared to males.

CONCLUSION

The promotion of well-being and lessening of stress builds competent and resilient youth who are well equipped for facing the challenges in their life . It also helps the youth's transition into adulthood much more easier. Helping the youth to identify stressors, enhancing their self-efficacy, capacity for goal identification and self-esteem, promoting the utilization of informal sources of support, such as friends and family, are some of the methods of dealing with stress that is worth considering in terms of interventions with college students.

TABLE 1

Correlation between Psychological Wellbeing and Perceived Stress

	Anxiety	Depressed	Positive	Self-control	General	Vitality	Psychological
		mood	wellbeing		health		wellbeing
Perceived stress	-.517**	-.576**	-.542**	-.493**	-.411**	-.508**	-.651**

**p<0.001

TABLE 2
Correlation between Psychological Wellbeing and Self-regulation

	Anxiety	Depressed mood	Positive wellbeing	Self-control	General health	Vitality	Psychological wellbeing
Self-regulation	.261**	.406**	.261**	.323**	.398**	.342**	.419**

P<0.01, *P<0.001

TABLE 3
Correlation between Perceived Stress, Self-regulation

	Self-regulation
Perceived stress	-0.321**

**P<0.01

TABLE 4
Mean, Standard Deviation and t-value of Perceived Stress, Self-regulation, and Psychological Wellbeing among Youth Grouped on the Basis of Gender

	Male N=47		Female N= 98		T value
	Mean	SD	Mean	SD	
Perceived stress	14.96	6.75	17.32	6.29	2.013*
Self-regulation	207.32	18.29	219.77	19.13	3.778***
Psychological wellbeing	69.17	13.49	68.89	14.71	0.115

*P< 0.05, ***P<0.01

TABLE 5
Analysis of Variance for Perceived Stress and Psychological Well-being with High, Intermediate and Low Self-regulation

		Sum of Squares	df	Mean Square	F
Perceived stress	Between Groups	644.495	2	322.247	8.373***
	Within Groups	5465.367	142	38.489	
	Total	6109.862	144		
Psychological well being	Between Groups	6516.941	2	3258.471	20.255***
	Within Groups	22843.997	142	160.873	
	Total	29360.938	144		

*P< 0.05, **P<0.01, ***P<0.001

Vol. 9, No. 1, September, 2014

TABLE 6

DMRT Analysis for Perceived Stress and Psychological well-being among different Self-regulation Group

	High self-regulation	Intermediate self-regulation	Low self-regulation
Perceived Stress	15.2222 ^a	14.6364 ^a	19.0164 ^b
Psychological well being	70.9444 ^b	75.5455 ^b	61.2951 ^a

Mean values with same letter as superscript are homogenous

REFERENCES

- Asberg, K., K. (2000). Perceived stress, coping, and adequacy of social support: Implications for subjective well-being in college students, A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in the Department of Psychology in the College of Arts and Sciences at the University of Central Florida, Orlando, Florida.
- Bandura, A. (1997). Self-efficacy: The exercise of control. New York: W. H. Freeman and Co.
- Bandura, A., Pastorelli, C., Barbaranelli, C., & Caprara, G. V. (1999). Self-efficacy pathways to child depression. *Journal of Personality and Social Psychology*, 76, 258-269.
- Baumeister, R. F. and Heatherton, T. F. (1996), Self-Regulation Failure: An Overview. *Psychological Inquiry*, 7(1), 1-15
- Beekman, A., Penninx, B., Deeg, D., deBeurs, E., Geerlings, S., & van Tilburg, W. (2002). The impact of depression on the well-being, disability and use of services in older adults: A longitudinal perspective. *Acta Psychiatrica Scandinavica*, 105, 20-27.
- Bouffard, T., Boisvert, J., Vezeau, C. & Larouche, C (1995). The impact of goal orientation on self-regulation and performance among college students. *British Journal of Educational Psychology*, 65(3), 317-329.
- Dupuy, H. J. (1984). The psychological general well-being (PGWB) Index. In N. K. Wenger, M. E. Mattson, C. D. Furberg & J. Elinson (Eds.), *In assessment of quality of life in clinical trials of cardiovascular therapies*. United States of America: Le Jacq publishing Inc.
- Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates. 567 pp.
- Cohen, S. & Williamson, G.M. (1988). Perceived stress in a probability sample of the United States. In Spacapan, S. & Oskamp, S. (Eds.), *The Social Psychology of Health*, Newbury Park, CA, Sage.
- Day, A. & Livingstone, H. (2003). Gender differences in perceptions of stressors and utilization of social support among university students. *Canadian Journal of Behavioral Science*, 35(2), 73-83.
- Glass, D. C., Singer, J. E., & Friedman, L. N. (1969). Psychic cost of adaptation to an environmental stressor. *Journal of Personality and Social Psychology*, 12, 200-210.

- Hamaideh, S.H. (2012). Gender differences in stressors and reactions to stressor among Jordanian university students. *International journal of social psychiatry*, 58, 26-33.
- Kafka, G.J., & Kozma, A. (2001). The construct validity of Ryff's scales of psychological wellbeing (SPWB) and their relationship to measures of subjective well-being. *Social Indicators Research*, 57, 171-190.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Mazure, C.M. (1998). Life stressors as risk factors in depression. *Clinical Psychology and Scientific Practice*, 5, 291-313.
- Miller, W. R., & Brown, J. M. (1991). Self-regulation as a conceptual basis for the prevention and treatment of addictive behaviors. In N. Heather, W. R. Miller & J. Greeley (Eds.), *Self-control and the addictive behaviors*, (pp. 3-79). Sydney: Maxwell Macmillan Publishing Australia.
- Omidi, A., Akbari, H., & Mahdian, M. (2011). Association of Happiness, Perceived Stress and Academic Achievement in Kashan University of Medical Sciences Students, International Conference on Medical, Biological and Pharmaceutical Sciences (ICMBPS'2011) Pattaya.
- Reis, H.T., Sheldon, K.M., Gable, S.L., Roscoe, J., & Ryan, R.M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin*, 26(4), 419-435.
- Robbins, P.R., & Tanck, R. (1992). Stress, coping techniques, and depressed affect: Explorations within a normal sample. *Psychological Reports*, 70, 147-152.
- Robinson, J., & Godbey, G. (1998). Trend, gender, and status differences in Americans' perceived stress, Society and Leisure, 21, 473-489.
- Ross, S.E., Niebling, B.C., Heckert, T.M. (1999) Sources of stress among college students, *College Student Journal*, 33(2), 312.
- Scott W.D., Dearing, E. and Reynolds W. R. (2008) Cognitive Self-Regulation and Depression: Examining Academic Self-Efficacy and Goal Characteristics in Youth of a Northern Plains Tribe, *Journal of research on adolescence*, 18(2), 379-394.
- Selye, H. (1956). Stress and psychiatry. *American Journal of Psychiatry*, 113, 423-427.
- Shields, M. (1999). Long working hours and health. *Health Reports*, 11, 1-17.
- Vohs, K. D., & Baumeister, R. F. (2004). Understanding self-regulation: An introduction. In R.F. Baumeister, & K.D. Vohs (Eds.), *Handbook of self-regulation: Research, theories, and applications* (pp. 1-9). New York: Guilford Press.

A STUDY OF CORRELATION BETWEEN LOCUS OF CONTROL AND ADHERENCE TO MEDICATION IN DIABETES TYPE 2 PATIENTS

Kadambari*, Swati Singh** and Deepti Hooda***

ABSTRACT

The present study is an attempt to examine the role of locus of Control in adherence to medication in Type 2 Diabetes. The research sample consisted of 100 subjects (both males and females) with age range 25-60 years. All the subjects were administered on Multidimensional Health Locus of Control Scale and Medical Adherence Rating Scale. Correlation and Regression analysis revealed significant results.

Keywords: Diabetes Type 2, Adherence to Medication and Locus of Control.

INTRODUCTION

Diabetes Mellitus or simply Diabetes is a chronic condition where the body fails to utilize the ingested glucose properly. This could be due to lack of the hormone insulin or because the insulin that is available is not working effectively. There are mainly three type of Diabetes.

- Type 1 Diabetes Mellitus results from the body's failure to produce insulin, and currently requires the person to inject insulin or wear an insulin pump. This form was previously referred to as "insulin-dependent diabetes mellitus" (IDDM) or "juvenile diabetes".
- Type 2 Diabetes Mellitus results from insulin resistance, a condition in which cells fail to use insulin properly, sometimes combined with an absolute insulin deficiency. This form was previously referred to as non insulin-dependent diabetes mellitus (NIDDM) or "adult-onset diabetes".

* Research Scholar, Department of Psychology, M. D. University, Rohtak. (email-kadambarisheoran@gmail.com)

** Assistant Professor, Department of Psychology, M. D. University, Rohtak. (email-deepti.hooda17@gmail.com)

- The third main form, Gestational Diabetes, occurs when pregnant women without a previous diagnosis of diabetes develop a high blood glucose level. It may precede development of type 2 DM.

Along with a huge global burden, It is estimated to increase from 51 million to 58 million in 2030 in India. (Snehlata and Ramachandaran 2009). It caused 2.263 million disability adjusted life years in India during 2004 (ICMR 2006). The risk or complications with Diabetes can be reduced by adhering to medical advice and keeping Diabetes under control. Blood sugar should be regularly monitored so that any problems can be detected and treated properly.

Treatment involves both diet and exercise along with oral medications to control blood sugar level. In all Type 1 Diabetics and severely uncontrolled Type 2 Diabetics a daily dose of insulin through injections may be needed. The success and failure, or even the control over diseased condition depends on the extent to which a patient "Adheres to Medication". ADHERENCE has been defined to the degree to which patient's voluntary behaviour corresponds with the clinical recommendations of health care providers. It suggests that patients are self sufficient individuals who assume an active and voluntary role in defining and achieve goals for their medical treatment.

So Medication adherence usually refers to whether patients take their medications as prescribed as well as whether they continue to take a prescribed medication. Results reported by Arunima Gupta, Punam Midha and Sonia Malik (2012) found maximum adherence to medication in Diabetic Patients (80%) and least in Arthritis (57.90%). Various factors influence person's adherence to medication such as genetics, environment, demographic variables, socioeconomic status and other interpersonal and intrapersonal factors. As per the study, role of Locus of Control in Adherence to Medication is studied.

Locus of Control, the generalized belief that the occurrence of outcomes is under the control of oneself or outside the self controlling forces and also included control of one's outcome by chance and /or other powerful people. Personal control beliefs, also referred to as locus of control and personal mastery beliefs, reflect individuals' beliefs regarding the extent to which they are able to control or influence outcomes. A wide variety of theorists have emphasized the importance of perceptions of personal control and suggested that the desire to control the world around us (*i.e.*, the desire for behaviour-event contingency or personal control) is a fundamental characteristic of human beings (Schultz et al, 1994; see also Haidt & Rodin, 1995; Rothbaum, Weisz and Snyder, 1982 for reviews). Reflecting these varied theoretical perspectives (as well as the extensive research interest in the concept of perceived control), the literature exhibits varying conceptualizations of "perceived control".

Most well known is the concept of "locus of control" which derived originally from Rotter's social learning theory (Rotter, 1966) and which focuses on "beliefs that individuals hold regarding relationships between actions and

outcomes" (Lefcourt, 1991). The earliest instrument developed to measure locus of control beliefs, the Rotter I-E Scale, focused largely on the distinction between beliefs in internal versus external loci of control. Later instruments, elaborated by Rotter, Lefcourt and others, included more specific assessments of beliefs about personal "internal" control contingencies but also control contingencies manifested by "powerful others" and (similar to the original "external" formulation) perceptions of non-contingency (*i.e.* "chance") (for review see Lefcourt, 1991). Existing literature on control beliefs in relation to both SES and health largely reflects the "internal vs. external" conceptualization with assessment of individuals in terms of the extent to which they see "control" as residing primarily in themselves versus elsewhere (*i.e.*, in others or chance). (Seeman, 1999).

Findings suggest that interventions aimed at improving internal locus of control may improve adherence to diabetic regimen but different diabetic patients have different attribution styles and interventional programmes to enhance diabetic self care will be more successful if patients locus of control is addressed. According to Rodin, an individual with high perceived control may have better health because he or she is more likely to take health enhancing action.

METHOD

Sample

A purposive sample of 100 adults (aged 25-60 years) was selected with following inclusion and exclusion criteria.

Inclusion Criteria

- Respondents in age range 25-60 were selected.
- Minimum education level was 12th.
- Respondents suffering from diabetes diagnosed by a medical practitioner were selected.
- The minimum duration of patient's disease was at least 2 years and maximum of 10 years.

Exclusion Criteria

- Respondents suffering from an acute disease during preceding one month were not included in the sample.
- Patients with extreme severity of disease or secondary complication were excluded.
- Patients with co-morbid disorders were excluded.

Tools

Following tools were used in the present study.

- *Medical Adherence Rating Scale* (Thompson, Kulkarni, & Sergejew 2000): It consists of 10 items with yes or no response. . The Medication

Adherence Rating Scale (MARS) is a questionnaire that tests a patient's compliance with medication. Patient's that respond "NO" to questions 1-6 and 9-10 and "YES" to questions 7-8 are compliant.

- *Multidimensional Health Locus of Control Scale (form c)*: This form is designed by Ken Wallston et al and is condition specific. This form has 18 items. Each item is a belief statement about medical condition with which one may agree or disagree. Beside each statement is a scale which ranges from strongly disagree (1) to strongly agree (6). For each item subject have to circle the number that represents the extent to which you agree or disagree with that statement. The more one agrees with a statement, the higher will be the number one circles. The more one disagrees with a statement; the lower will be the number one circles. Please make sure that you answer. This is a measure of personal beliefs; obviously, there are no right or wrong answers

Procedure

Purposive sample of persons with diabetes was selected. First of all the subjects were introduced to the study. Good rapport was established. After they felt comfortable and became familiar to the situation, they were instructed as to how to respond on the scales of 'Locus of Control' and Medical Adherence. Each subject was administered 2 scales which included scale for Locus of Control and Adherence to Medication Scale. Subjects were also made to know the purpose their participation will serve. So all the subjects were assessed on above mentioned tools to see role of Locus of Control in adherence to medication in people with Type 2 Diabetes using correlation and regression statistical techniques.

RESULTS AND DISCUSSION

The present study aimed to investigate the relationship between Locus of Control and Adherence to Medication. Multidimensional Health Locus of Control Scale and Medical Adherence Rating Scale were administered on a sample of 100 Diabetes Type 2 patients. Correlation was computed to study the relationship between Locus of Control and Adherence to Medication. Further stepwise regression was applied to estimate the extent of variance in Medical Adherence with Locus of Control scores. Out of four types of Locus of Control taken i.e. 'Internal', 'Chance', 'Doctor' and 'Other Powerful', Medical Adherence was found to be significantly correlated with Internal Locus of Control and Powerful Others. This means that higher is the Internal Locus of Control, higher will be the Medication Adherence i.e. when the person feels himself responsible for his good health, better is the chances that he will adhere to Medication. Significant correlation with Powerful Others (such as health agencies) reveals that individual is more likely to rely on the medical professionals to take care of their health.

TABLE 1
Coefficient of Correlation between Locus of Control and Adherence to Medication Rating Scale

Locus of Control	Adherence to Medication
1. Internal	.505**
2. Chance	.073
3. Doctor	.008
4. Others Powerful	.221*

* $p < .05$ ** $p < .01$

From table 1, it can be seen that Internal Locus of Control with correlation coefficient .505 ($p < .01$) has significant as well as positive correlation with Adherence to Medication *i.e.* increase in Internal Locus of Control will be accompanied by increase in Medical Adherence or better Adherence will be there. The finding in this study is in line with those of Oviageli Omeje and Chinenye Nebo (2011) who concluded that internally oriented patients adhered more to their treatment regimen than externally oriented patients.

The correlation of Medication Adherence to Powerful Others is .221 ($p < .05$). This means that Medical Adherence and Powerful others (sub-factor of Locus of Control) correlate significantly. Positive correlation reveals that higher the score on powerful other, more will be Medication Adherence. Higher a person relies on powerful others (health agencies, medical professionals), more will be Medication Adherence. This also indicates that health agencies and medical professionals play a significant role in convincing people to adhere to medication. Elizabeth A. Schlenk, R.N., and Laura K. Hart, R.N. (1984) found a statistically significant relationship between Powerful Other Health Locus of Control and Medication Adherence. Chance and Doctor Support of Locus of Control do not correlate significantly with Adherence to Medication.

In order to examine the extent to which various sub-factors of Locus of Control predict the criterion variable *i.e.* Medication Adherence, stepwise multiple regression was employed to identify the factors that account for maximum proportion of variance in Medication Adherence.

TABLE 2
Regression Table

Predictor	R	R Square	B	F	Significance level
Internal LOC	.505	.255	.186	33.619	.01

Regression analysis on Medical Adherence Rating scores indicates that only one variable *i.e.* Internal Locus of Control is predictor of Medication Adherence. Multiple R is equal to .505 and R square equal to .255 ($F = 33.619$, $P < .01$).

This shows that Internal Locus of Control accounts for 25.5% of variance in Medication Adherence. Annette L. Stanton (1987) found that greater expectancy of Internal control over health, greater knowledge of treatment regimen and strong social support were significant determinants of adherence.

CONCLUSION

Adherence to Medication is a very important factor in medicine efficiency. It is very important aspect of behaviour that promotes good health and promotes longevity. It also helps to assess accurately the degree of drug efficiency. Since, Diabetes is a chronic disease where management of diseased condition is the primary aim, the importance of Adherence to Medication become more significant. In such a situation, giving due consideration to the factors affecting Medication Adherence becomes more critical. In summary because research has shown the importance of adherence to medication in healthcare and also present study shows the influence of Locus of Control on it, healthcare providers should take this and other such variables into consideration when planning and implementing health policies in order to achieve desired objectives.

REFERENCES

- Gupta A., Midha P., Malik S. (2009), Attitude towards Medication Adherence in chronic patients: Need for psycho-education. *Indian journal of Health and Wellbeing* 3(1), (80-84).
- Guidelines for Management of Type 2 Diabetes. Indian Council of Medical Research 2005.
- Haidt J, Rodin J. (1995). Control and Efficacy: An Integrative Review. Report to John D. and Catherine T. MacArthur Foundation Program on Mental Health and Human Development.
- Lefcourt, HM. (1991). Locus of Control. In Robinson, J.P., Shaver, P.R., Wrightsman, L.S. (Eds.) *Measures of Personality and Social Psychological Attitudes* (Vol. 1, pp. 413-499). San Diego, CA: Academic Press, Inc.
- Omeje, O. & Nebo C. (2011). The influence of Locus of Control on Adherence to Treatment Regimen among hypertensive patients. *Patient Prefer Adherence*, 5: 141-148.
- Rothbaum, R., Weisz, J.R. & Snyder, S.S. (1982) changing the world and changing the self: a two-process model of perceived control. *J Pers & Soc Psych*, 42: 5-37.
- Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Journal of Educational Research*, 74(3): 185-190.
- Schlenk E. & Hart L. (1984) Relationship between Health Locus of Control, Health Value and Social Support and Compliance of persons with Diabetes Mellitus. (Diabetes Care, 1984) 7:566-74.
- Schultz, R., Heckhausen, J, & O'Brian, A.T. (1994) Control and the disablement process in the elderly. *J Soc Beh and Pers*, 9: 139-152.
- Seeman, T. (1999). MacAurthur Research Network on Socioeconomic Status and Health: <http://www.macses.ucsf.edu/Research/Psychosocial/notebook/control.html>

- Snehitha and Ramachandaran 2009, Insight into validity of a new Medication Adherence Rating Scale (MARS) for the psychoses. *Schizophr Res.* 2000; 42: 241-7.
- Stanton, L.A. (1987). Determinants of Adherence to Medical Regimens by Hypertensive Patients. *Journal of Behavioural Medicine*, Vol. 10, No.4.
- Thompson, K., Kulkarni, J. & Sergejew, A.A. (2000). Reliability and validity of a new Medication Adherence Rating Scale (MARS) for the psychoses. *Schizophr Res.*; 42: 241-7.
- Wallston, K.A., Wallston, B.S., and DeVellis, R.F. (1978). Development of the Multidimensional Health Locus of Control (MHLC) Scales. *Health Education Monographs*, 6, 161-170.



[Faint, illegible text, likely bleed-through from the reverse side of the page.]

[Faint, illegible section header.]

[Faint, illegible text, likely bleed-through from the reverse side of the page.]

ever
Muc
crea
emp
kog
wid
(Cs
rela
unv
a su
Ka
jus
ord

Me
ess
att
19
pre
typ

*
*

RORSCHACH PROTOCOLS OF SUBJECTIVE EXPERIENCE OF WELL BEING IN HIGH CREATIVES

B.S. Sandhu, and Tarika Sandhu***

INTRODUCTION

Creativity and its domains defy precise definition since they encompass every sense- sight, smell, hearing, feeling, taste and even the extrasensory. Much of it remains unseen, nonverbal and unconscious. The phenomenon of creativity comprises of many nuances and interpretations with the extreme empiricists trying to throw a net of analytical propositions to grasp it (Wallach & kogan, 1965 & Guilford, 1968) and the metaphorically oriented theories ever widening its scope to highlight its relevance in every aspect of human functioning (Csikzentmihalyi, 1998 & Sawyer, 2006). Even decades of research on the relationship between intellectual functioning and creativity have been unable to unveil the exact nature of this enigmatic concept which sometimes appears to be a subset of IQ, sometimes overlapping and at other times just disjoint. (Sternberg, Kaufman, and Pertz, 2002). Interestingly Le francois (1982) had remarked that just as very low intelligence was stupidity, similarly very low creativity was ordinariness.

Attempts were made by many investigators such as Crutchfield (1962), Moustaks (1967) by contrasting creativity with conformity in order to grasp its essence. Apart from the defining standpoint of creativity, its expanse covers attitudes, underlying subtle processes and achievements (Barron & Harrington, 1981). Mooney (1963) suggested four approaches to creativity viz. environment, product, process, and person. The creative process and creative product have typically been seen as the criteria of creativity. The creative person has been the

* Professor, Deptt. of Psychology, Punjabi University, Patiala

** Asstt.Prof., Deptt. of Psychology, Punjabi University, Patiala

main basis of prediction in the equation with environment used variously as a modifier in the equation as the stimulus situation through which inner processes are activated (Taylor, 1988). Recently Runco (2007) added 'potential' after Simonton (1990) who had added 'persuasion' to extend the four 'p' framework. Simonton (1990) described creativity as 'persuasive' by considering creative outputs to have the capacity to alter existing notions lending a social perspective to creativity. The potential differentiation as proclaimed by Runco (2007) exists between creative potential and creative performances with the former appreciating and giving significance to yet unfulfilled possibilities and subjective processes. To sum up Plucker et al, (2004). Comprehensively combined the whole gamut of opinions on creativity by describing it as "The interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context".

Beyond speculative definitions making estimations about the nature of creativity another debate persisted alongside related to its domain specificity or generality. (e.g., Baer, 1993; Sternberg, Grigorenko, & Singer, 2004). Creativity within domains expresses itself varyingly.

The genesis and mechanisms of creativity within the sciences and arts was brought to the fore when Stanley Stark (1969) distinguished two relatively independent contexts of creativity. He proposed 'novelty' which was akin to problem solving capacities and 'meaning' type of creativity which connoted aesthetic sensibilities. Dunbar (1995) concluded that creative expressions of the scientist is never an accidental and sudden insight, rather it's a long drawn effort and a careful reasoning towards the final solution.

The science streams i.e., physical, biological, chemical, engineering show a common overlap whereas literary, philosophical, musical and sculptural creativity show commonalities markedly differentiated from the previous group. Scientific creativity always involves an addition to previous knowledge, either an improved theory or a new object or procedure, whereas artistic creativity may give new representation of life (e.g. painting, poem) or feeling, but not usually progression from previous representations (Vernon, 1989).

Creative productivity has been understood as a particular type of cognition (a particular method of combining mental elements) with a certain configuration of personality traits especially behavioral traits (that manifest in performance) namely aptitude, interest, attitudes and temperaments. A creative pattern becomes manifested in creative behaviour which includes activities such as inventing, designing, contriving, composing and planning. Dellas and Gaier (1970) constructed the picture of a truly creative personality by attributing to it traits such as: Independence in attitude and social behaviour, dominance, introversion, openness to stimuli, intuitiveness, flexibility, radicalism and rejection of external constraints.

A large number of studies have also shown positive association between creativity and major affective disorders and other forms of psychopathology (Edel, 1975; Goertzel & Goertzel, 1978; Karlsson, 1978; Phillips, 1982; Jamison, 1988; Gibson, 1989; Weisberg 2006; Batey & Furnham 2008). Alongside a strong evidence is available for the positive association of creativity with indices of mental health (Cattell, & Butcher, 1967; Stein, 1971; Maslow, 1973; Torrance, 1989; Renzuilli, 2005).

Equivocal findings regarding emotional stability, ego-strength, and anxiety do suggest that people create under varied and differing conditions-internal as well as external. It is highly plausible then that some personal factors might show distinct manifestations across different domains of creative activity such as the arts and sciences. One such factor which deserves attention is the creator's subjective experience of well being. Though intuitively even a layman knows what the term 'well being' implies yet questions are raised about precise empirical conceptualizations in the scientific arena. Broadly subjective well being relates to positive mental health.

The parameters for assessment of mental health are numerous ranging from self esteem to resilience. According to Emerson (1985) well being is the satisfaction of an individual's goals and needs through the actualization of their abilities or life style. Hence it is not only about extra-psyche success rather it also includes intra-psyche health. It is an experience of functioning effectively and happily as a person in one's expected role. It is a condition of the whole personality (not merely condition of the mind). It is an outgrowth of one's total life and is promoted or hindered by day-by-day experiences, not only by major crises being a matter of degree.

High creatives in any domain of creative production too would be experiencing various degrees of well being as would any other individual falling in a normally distributed population. The behavioral repertoire of an individual in varied situations is under the influence of his creative assimilations and consequent execution of decisions thus formed. The objective of the present study was to test how subjective experiences of well being of the creative individuals in the fields of science and literature would influence their productions/end products/accomplishments.

METHODOLOGY

Sample for the study comprised of 20 creative young male subjects (10 from sciences and literary fields each) with age ranging from 25-32 yrs. Creative subjects for the study were selected on the basis of subjective ratings of their supervisors/seniors and peers for their creativeness. The criteria used for inclusion of creative subjects in the sample for the two domains was number of publications i.e., 5 and more research papers in science and 10 poems/short stories in

literature. An empirical validation of creativity was performed by assessment of scores on Torrance test of creative thinking. The obtained scores on combined indices of verbal and figural Fluency (60-70), Flexibility (39-47), Originality (45-55) and Figural Elaboration (65-76) were higher as compared to norms of their age groups. This indicated that subjects selected on the basis of supervisors ratings were appropriate selections even with actual psychometric indices of the criteria. All the subjects were required to give detailed report of their achievements. Qualitative evaluation of their productions was done by experts from their respective fields. Ratings of subjective wellbeing were based on scores of subjects on the PGI Well being measure by Verma & Verma (1988). 5 subjects with high well being (having scores of 17 & above) and 5 subjects with low well being (having scores of 12 & below) were taken for the study within the high creative group. Rorschach Ink Blot test was administered to 5 high and 5 low well being subjects (amongst the high creativity group) in sciences and arts. Inferences were drawn on the basis of analysis of Rorschach responses for indices of Form, Colour, Movement and Texture and qualitative information obtained for production by the creative persons.

RESULTS

Analysis of Rorschach responses of subjects in four groups suggested that indices of Wholes (W), Form (F), Human Movement (M), and Color (FC) response along with total number of responses (R) elicited by subjects were useful for identifying differences in the high creatives who differed on subjective experience of well being within sciences and arts.

Analysis of Rorschach responses of high creatives, high and low on well across sciences and literary arts: Subjects with high sense of well being in both science and literature tended to give greater number of responses (R) to 10 inkblots *i.e.*, 40-50. These subjects also yielded high scores on Form (F) indices. This implies that subjects with high subjective experience of well being had an uninhibited impulse to produce more and more responses. This tendency hints at a general capacity for productivity of individuals from both sciences and literature. Their score on Pure Form responses 'F' ranged from 18-30.

Higher 'F' responses were suggestive of predominance of reality oriented rationality and emotion free modes of problem solving and decision making styles. Another noteworthy marker of this group had been their range of 'Form Colour' response (FC, 3-10) and 'Colour Form' (CF, 0-2) responses. While the 'FC' scores were indicative of better internal controls, near absence of 'CF' in the whole group revealed that individuals in the category of 'high subjective well being and high creativity' were rarely swayed by emotions even though belonging to different domains of creative production.

High Creatives mainly from the area of literature with low subjective wellbeing gave relatively lesser number of total responses (R, 22-35) and less pure form

responses (F,14-22) as compared to subjects who were high on subjective well being. Though these scores were comparatively on the lower side but certainly not indicative of a stunted capacity for productive creativity or loss of touch of reality. Primacy of Colour as a dominant in their responses hints at another significant feature of psychic functioning of these.. Number of Colour dominated Form responses (CF,5-8) almost matches with their Form Colour responses (FC,7-10) responses. This ratio seems to hint at the possibility of oscillation between states of better internal controls on one hand and dominance of affect on the other. Human movement responses hint at higher emotional sensitivity to internal and external cues.

Interestingly use of entire blot *i.e.*, Wholes in their percepts of Location, (W,10-13 & 9-12) and Human Movement responses (M,8-10 & 7-10) do not show any marked differences between groups of subjects with high and low subjective well being respectively. Observation of complex organizational activity in almost all the Whole percept responses of both groups reveals their likelihood to remain engaged in creative activity, though in different styles and contexts.

The overall patterns of sores on all indices of Rorschach for both the groups reveals that subjects with high sense of subjective well being fall in the Rorschach's creative category of introversives while creative subjects with low subjective well being could be called ambiverts. The marked difference between these two categories in the Rorschach systems is that introversives are more apt to utilize internal resources in a problem focused and reality oriented manner where as ambiverts tended to oscillate between inwardly and outwardly orientations in the utilization of internal resources.

Qualitative analysis of creative production of subjects each in the sciences and literary arts: Evaluation of research activities and paper publications of subjects in science was done by their research supervisors. The reports invariably suggested that subjects with high well being were more innovative, designed 'their investigations after thorough scrutiny of their work, were more skeptical, critical and open to changes and challenges'. Subjects with low well being were relatively less productive with their emphasis on replication, verification and extension of work suggested by supervisors only.

In the literary domain theme based content analysis of poems and short stories revealed that the main concerns of subjects with 'high well being' were related to social evils, inequality, political ideology on one hand and idealistic, perfection oriented with message of universal brotherhood on the other. Subjects with 'low well being' depicted a pessimistic world view in their writings. Plots of their short stories were complex, depicting conflicts, contradictions and suffering ultimately resulting in irresolvable conflict but acceptance of circumstances. All these characteristics of nature of writing presumably provides a rich source of catharsis to the writer. Foregeard (2008) analysed linguistic patterns of some eminent writers with psychiatric problems especially unipolar,

Journal of Indian Health Psychology

bipolar and those who had none of these and he too found a marked difference in these groups, *i.e.*, writers with bipolar and unipolar disorders used more death related words with pessimistic orientations as compared to the mentally healthy group.

In the context of the present study Rorschach protocols of creative individuals in both the fields viz sciences and literature reveal that at the same level of creativity, variations in degrees of subjective experience of well being manifests in the direction and quality of creative production. Contrary to belief, Rorschach responses did not vary for the 'high creativ, high SE of well being' subjects in arts and sciences as had been postulated earlier. The probable rationale is that though the basis of creativity may differ in the arts and sciences, yet the personality traits sustaining it generalizes across domains. These results are strong clues to the problem of how and why creative people tend to choose specific issues to be addressed by their own selves in a life span of creative outputs .

REFERENCES

- Baer, J. (2003). *Creativity and divergent thinking: A task -specific approach*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Barron, F. & Harrington, D. (1981). Creativity, Intelligence and Personality. *Annual Review of Psychology*, Vol. 32, 336-350.
- Batey, M. & Furnham, A. (2006). Creativity, Intelligence, and Personality: A critical Review of the Scattered Literature. *Genetic, Social, General Psychology Monographs*, 132(1), 355-429.
- Cattell, R.B. & Butcher, H.J. (1968). *The prediction of achievement and creativity*. New York: Bobbs Merrill.
- Crutchfield, R. (1962). Conformity and creative thinking. In H. Gruber, G. Terrel & M. Wertheimer (Eds.), *Contemporary approaches to creative thinking* (pp234-256). New York: Atherton.
- Csikszentmihalyi, M. (1998). Reflections on the field. *Roeper Review*, 21, 80-81.
- Dellas, M. & Gaier, E.L. (1970). Identification of creativity: The individual. *Psychological Bulletin*, 73, 55-73.
- Dunbar, K. (1995). How scientists really reason :Scientific reasoning in real world laboratories. In R.J. Sternberg & J.E. Davidson (Eds.), *The nature of insight* (pp 365-395). Cambridge, MA: The MIT Press.
- Edel. L. (1975). The madness of art. *Annual Journal of Psychiatry*, 132, 158-169.
- Felice and Perry (1995). Quality of life :Its definition and measurement. *Research in Developmental Psychology*, 16(1).
- Foregard, M. (2008). Linguistic styles of eminent writers suffering from unipolar and bipolar mood disorder. *Creativity Research Journal*, 20, 81-90.
- Ghiselin, B. (1955). *The Creative Process*. New York: Mentor.
- Gibson, C. (1889). *The characteristics of genius: A popular essay*. London: Walter Scott.

- Guilford, J.P. (1968). *Intelligence, creativity and their Educational Implications*. CA: Robert R. Knapp Publishers.
- Jamison, K.R. et.al. (1980). Clouds and Silver lining. *American Journal of Psychiatry*, 137, 233-245.
- Karlsson, J.L. (1968). *Inheritance of creative intelligence: A study of genetics in relation to giftedness and its implications for future generations*. Chicago: Nelson Hall.
- Lefrancois, G.R. (1982). *Psychology of Teaching: A bear rarely faces the front*. Belmont, CA: Wadsworth.
- Mackinnon, D.W. (1967). Educating for creativity: A modern myth. In P. Heist (Ed.), *Education for creativity* (pp.1-20). Berkeley, CA: Centre for Research Development in Higher Education.
- Maslow, A. (1972). *Farther reaches of Human nature*. New York: Penguin.
- Mooney, R.L. (1963). A conceptual model for four approaches to the identification of creative talent. In C.W. Taylor & F. Barron (Eds.), *Scientific Creativity: its recognition and development* (345-360). New York: Wiley.
- Moustakas, C. (1967). *Creativity and confirmity*. London: D. Van Nostrand Co. Inc.
- Nicholl, J. G. (1972). Creativity in the person who will never produce anything original and useful: The concept of creativity as a normally distributed trait. *American Psychologist*, 27.
- Perkins, D. (2000). *The Eureka effect: The Art and Logic of Breakthrough Thinking*. New York, NY.
- Phillips, R.H. (1982). Mood, creativity and psychotherapeutic participation of patients receiving lithium. *Psychosomatics*, 23, 143-151.
- Plucker, J.A., Beghetto, R.A., & Döw, G. (2004). Why isn't creativity more important to educational psychologists? Potentials, pitfalls, and future directions in creativity research. *Educational Psychologist*, 39, 83-96.
- Renzuilli, J.S. (2005). The three ring conceptions of giftedness: A developmental model for promoting creative productivity. In R.J. Sternberg & J.E. Davison (Eds.) *Conceptions of giftedness* (2nd ed., pp 246-280). New York: Cambridge University Press.
- Runco, M.A. (2007). *Creativity: Theories and themes: Research, development, and practice*. New York: Academic Press.
- Sawyer, R.K. (2006). *Explaining creativity: The science of human innovation*. New York: Oxford University Press.
- Simonton, D.K. (1990). History, Chemistry, psychology, and genius: An intellectual autobiography of historiometry. In M.A. Runco & R.S. Albert (Eds). *Theories of creativity* (pp. 92-115). Newbury Park, CA: Sage.
- Stein, M.I. (1974). *Stimulating Creativity* (Vol.1 & Vol.11). New York: Academic Press.
- Sternberg, R.J., Grgorenko, E.L., & Singer, J.L. (2004). *Creativity: From potential to realization*. Washington, DC: American Psychological Association.
- Sternberg, R.J., Kaufman, J.C., & Pretz, J.E., (2002). *The creativity conundrum*. New York: Psychology Press.
- Taylor, C.W. (1988). Various approaches to and definitions of creativity. In Robert. J. Sternberg (Ed.), *The Nature of Creativity* (211-235). New York: Cambridge University Press.

- Torrance, E.P. (1974). *Torrances Tests of Creative Thinking*. Ginn & Co.: Personnel Press.
- Vernon, P.E. (1989). The nature-nurture; problem in creativity. In J.A., Glover, R.R. Ronning & C.R. Reynolds. *Handbook of Creativity*. New York: Plenum Press.
- Wallach, M.A., & Wing, C.W., Jr. (1969). *The talented student: A validation of the creativity-intelligence distinction*. New :Holt, Rhinehart& Winston .
- Weisberg, R.W. (2006). *Creativity :Understanding innovation in problem solving, science, invention, and the arts*. New York: John Wiley & Sons.

BOOK REVIEW

APPLIED SPIRITUALITY

Theory, Research and Practice

Authored by: Akbar Husain and Sabira Khan

Global Vision Publishing House, New Delhi, 2013

Rs. 1200/, ISBN: 978-81-8220-632-8



The concept of spirituality is inclusive and affects everybody. Spirituality is concerned with people finding meaning and purpose in their lives, as well as the sense of belonging, of community. Inner-peace, well being and fulfillment are often terms associated with spirituality, as the concept focuses on listening to one's 'inner-self' and one's true desires. The book 'Applied Spirituality: Theory, Research and Practice' by Akbar Husain and Sabira Khan focuses on the effective application of spirituality in all walks of life. The book provides a comprehensive picture of spiritual practices and their role in promoting the well being of individuals.

The first chapter acts as an introduction that defines the meaning and importance of spirituality. The chapter gives the message that one can unite the entire community or world with the expression of truth that can be achieved by means of spirituality. The positive values cultivated by spirituality not only enhance the mental health but also enhance the quality of life of individuals.

In second chapter the authors highlight the distinctive features of spirituality and religion. The chapter emphasizes that these two i.e. spirituality and religion are two separate systems and not interchangeable terms.

The next chapter focuses on spiritual well-being, which is an integral part of mental, emotional and physical health. Spiritual well-being promotes the personal values, healthy relationships, meaning of life and purpose, forgiveness and self esteem of individuals and leads towards a complete wellness. The

Journal of Indian Health Psychology

authors have emphasized that the components of spiritual well-being should be a part of medical treatment for enhancing the quality of life of patients.

The fourth chapter deals with 'our ultimate intelligence' i.e. spiritual intelligence, which is an important attribute of an individual to achieve success in his life. Spiritual intelligence is the set of abilities that individuals use to apply, manifest and embody spiritual resources, values and qualities in ways that enhance their daily functioning and well-being. The impact of spiritual intelligence plays a very important role to solve the problems faced especially by adolescents.

The next chapter reflects the importance of the application of spiritual practices in counseling. Counselors can make use of the spiritual beliefs of their clients to help them to explore and resolve their problems. This chapter stresses that spiritual values need to be addressed in counseling sessions as well as in the training programs of counselors. In later chapters, the authors speak about the practical applications of spirituality in such diverse areas as healing practices, sports, work place, business and ethics. Inclusion and application of spiritual practices in all these fields will provide meaning and purpose to life; this also builds self confidence and boosts self esteem. Self esteem is not only seen as a basic feature of mental health but also as a protective factor that contributes to better health and positive well being.

The authors also describe the techniques of yoga therapy and their physical, psychological and spiritual benefits. Yoga practices helps in achieving self realization. It improves the physical and mental health of individuals. Well-being is probably one of the most important aspects of human beings and state of well-being can be attained in terms of healthy body with healthy mind. The professionals should include yoga practices in the treatment of psychiatric patients especially for cases of depression and children with ADHD.

The final chapter enumerates the various aspects and benefits of spiritual training programs. These programs are not only beneficial for clients but helpful in enhancing the spiritual practices and professional competencies of professionals. The main objective of these training programs is to enhance one's awareness, knowledge and skills to deal effectively with one's environment.

Practicing spirituality expands and deepens the field of perception little by little, to the point that one can find answers to one's own questions. Spirituality concentrates on exploring our inner wants and desires and can totally transform some people's life, offering them a sense of contentment, well-being and meaning. This book is a significant contribution for the students, researchers, academicians and practitioners working in the field of spirituality. It is a comprehensive master piece, largely exhaustive in scope and application.

Sarvdeep Kohli
Professor,

Department of Psychology
M.D.University, Rohtak.

Journal of Indian **Health Psychology**

Journal of Indian Health Psychology (JIHP) is a biannual refereed Journal devoted to interdisciplinary research with the objective of furthering an understanding of the scientific relationship between behavioural principles on one hand and health issues on the other. The Journal provides a forum to integrate the theoretical, empirical and application based knowledge in this area. The distinctive feature of the journal is to include a special section of the articles based on Indian perspectives of health psychology and behaviour. Dissemination of the knowledge among the professionals and upcoming researchers will go a long way in benefitting the masses at large. Research carried out at individual, group and community level are welcome.

EDITORS

Prof. Rajbir Singh
Department of Psychology
M.D. University, Rohtak
Mob: 9416380748

Prof. NovRattan Sharma
Department of Psychology
M.D. University, Rohtak
Mob: 9355612805

MANAGING EDITOR

Dr. Deepti Hooda
Dept. of Psychology
M.D. University, Rohtak
Mob-9416740136

BOARD OF CONSULTING EDITORS

Prof. A.K. Srivastava
Deptt. of Psychology
Banaras Hindu University,
Varanasi-221005

Prof. Amrita Yadava
Deptt. of Psychology
M.D. University,
Rohtak-124001

Prof. Girishwar Misra
Deptt. of Psychology
University of Delhi,
Delhi-110007

Prof. G.P. Thakur
12, Qutabview Apartment
Shaheed Jeet Singh Marg,
Delhi-110007

Prof. Jayanti Basu
Deptt. of Applied Psychology
University of Calcutta,
Kolkata-700009

Prof. Manas K. Mandal
Defence Institute of
Psychological Research
Timarpur, Delhi-110054

Prof. Meena Hariharn
Centre for Health Psychology
Central University of Hyderabad,
Hyderabad, (A.P.)-500046

Prof. Sagar Sharma
House No. 564,
Sector-36B
Chandigarh-160036

Prof. Shikha Dixit
Deptt. of Humanities and
Social Sciences
I.I.T. Kanpur (U.P.)-208016

Prof. Urmi Nanda Biswas
Deptt. of Psychology
The M.S. University, Baroda,
Vadodara-390002

The views expressed in this journal are of the writers and may not necessarily reflect those of the editors and editorial board.

The territorial jurisdiction of the disputes shall be N.C.T. of Delhi.

Journal of Indian **Health Psychology**

VOL. 12, NO. 1, September, 2017

Shant

Gurukul Kangri Vishwavidyalaya
HARIDWAR

Editors

Prof. Rajbir Singh

Prof. NavRattan Sharma

Owned, Printed & Published by Dr. N.K. Singh, F-4, 'Hari Sadan', 20, Ansari
Road, Daryaganj, New Delhi-110002
Printed at: R.K. Offset, Naveen Shahdara, Delhi-110032.

Journal of Indian Health Psychology is a biannual Journal devoted to interdisciplinary research publication with the objective of furthering an understanding of scientific relationships between behavioural principles on one hand and health issues on the other. This journal shall provide a forum to integrate the theoretical, empirical and application based knowledge in this area. The distinctive feature of the journal will be to include a special section of the articles based on Indian perspectives of health psychology and behaviour. Dissemination of the knowledge among the professionals and upcoming researchers will go a long way in benefiting the masses at large. Research carried out at individual, group and community level are welcome.

**To enter your subscription for outstanding biannual research journal
Journal of Indian Health Psychology**

Please fill out and return the Order Form below (or a copy thereof)

SUBSCRIPTION ORDER FORM

Please enter my subscription to **Journal of Indian Health Psychology**

Volume.....

No.

Year.....

SUBSCRIPTION RATES

	Print Price			Online Price			Online + Print Price		
	Rs.	\$(US)	€	Rs.	\$(US)	€	Rs.	\$(US)	€
Annual	3000	150	100	4500	225	100	6000	300	200
Two Years	6000	300	200	9000	450	300	12000	600	400
Five Years	16000	800	450	24000	1200	500	32000	8000	1000

I enclosed a cheque/DD/MO/of Rs./\$/€.....cheque/DD No.....

made payable to the **Global Vision Publishing House**.

(Please add Rs. 100 for outstation cheques)

Name/Inst:

Address:

Tel. No. email

Signature

NOTES:

1. Kindly issue Cheques/Draft/MO drawn in favour of **Global Vision Publishing House** and payable at Delhi.
2. All subscription will be processed only against advance payment.

GLOBAL VISION PUBLISHING HOUSE

F-4, 1st Floor, 'Hari Sadan', 20, Ansari Road, Daryaganj,
New Delhi-110002 (INDIA)

Tel.: Tel.: 23261581, 23276291, Mob: 9810644769

Email: editorial@globalvisionpub.com; info@globalvisionpub.com

Website: www.globalvisionpub.com

EDITORIAL

The current issue of the Journal of Indian Health Psychology has twelve research articles and one short communication that deal with variety of psychosocial issues relating to health and illness.

The first article by C.R. Darolia, Pardeep Kumar and Shashi Darolia empirically validated Das's PASS (Planning, Attention, Simultaneous and Successive processing) Reading Enhancement Program (PREP) on Indian children with reading and spelling deficits.

Anubhuti Dubey and Nisha Kumari have reported strong relationships between patients' beliefs about their condition and their well being. The findings of their study emphasis that health professionals should address to negative beliefs and emotions surrounding the condition of the cancer patients, while designing the treatment programme.

Kavya Chelli, R. Lalnuntluangi and Meera Padhy found that health hardiness explained significant proportion of variance in illness perceptions and pointed towards the need for developing health hardiness based interventions to enhance positive illness perceptions in patients with type 2 diabetes.

The next article in this issue by Shyodan Singh, D. Chao and Satish Kumar Rajoria reported that Yoga has profound effect on physical and psychological Well-being of Indian elderly people.

The findings of the study conducted by Ranjana and Nandini Moudgil reported intelligence and neuroticism as strong predictors of well-being. Jyoti Sharma and Anita Sharma reviewed on Psycho-social factors in alcoholism and conducted a pilot surveys' outcome shows that rural and urban alcoholics differ accordingly with social class, the two factor interaction shows.

Lovely Gyan and Archana Shukla assessed Emotional Intelligence of customer tackling and housekeeping staff of Indian railways and found better Emotional Intelligence in customer tackling than housekeeping.

Priyanka Behrani, in the next article have reported significant differences in Subjective Well Being of Young Adults of Single Parent Family and Dual Parent Family.

(iv)

Mohammad Amin Wani and R. Sankar from a research conducted on HIV AIDS Patients concluded that most of the AIDS patients have moderate and severe level of anxiety, stress and depression.

The next article by Rupan Dhillon and Deepti Randhawa reported that school adjustment is the most important predictor for high motivation in both boys and girls.

Rajesh Ganesan and Moon Banerjee have highlighted the effectiveness of psychological intervention in reducing the frustration reactions and further emphasized the need to incorporate such behaviour interventions in the curriculum at all the educational levels that could help in managing and mitigating the frustrations and stresses experienced by the students.

Rita Rani Talukdar and Sukanya Bora have talked about menopausal anxiety in women and importance of developing interventions to address this kind of anxiety.

All the articles enlisted in this issue will provide direction for young researchers working in the field of health and well-being. Editors express gratitude to all the contributors for their research contributions. Editors are also grateful to the referees and members of editorial board for their valuable inputs. The members of the editorial board are of the view that the journal tries to sensitize the readers to various health related psychosocial issues that would pave the path towards healthy and flourishing communities.

Editors

Contents

<i>Editorial</i>	(iii)
1. Empirical Validation of PASS Reading Enhancement Program: An Indian Experience	1
<i>C.R. Darolia, Pardeep Kumar and Shashi Darolia</i>	
2. Cognitive Representation of Illness, Coping and Wellbeing in Cancer Patients	9
<i>Anubhuti Dubey and Nisha Kumari</i>	
3. Health Hardiness and Illness Perceptions in Type 2 Diabetes Patients	24
<i>Kavya Chelli, R. Lalnunluangi and Meera Padhy</i>	
4. The Role of Yoga on Well-being of Indian Elderly	36
<i>Shyodan Singh, D. Chao and Satish Kumar Rajoria</i>	
5. Intelligence and Personality as Predictors of Well-Being	45
<i>Ranjana and Nandini Moudgil</i>	
6. Psycho-Social Factors in Alcoholism: A Review with Empirical Evidence	54
<i>Jyoti Sharma and Anita Sharma</i>	
7. Emotional Intelligence among Customer Tackling and Housekeeping Staff of Indian Railways	66
<i>Lovely Gyan and Archana Shukla</i>	
8. A Comparative study of Subjective Well Being of Young Adults of Single Parent Family and Dual Parent Family	78
<i>Priyanka Behrani</i>	

9. Stress Anxiety and Depression Among HIV/AIDS Patients

Mohammad Amin Wani and R. Sankar

87

10. Impact of Attitude and Emotional Intelligence on Quality of Life of Menopausal Women: A Review

Seema Vijayvargiya and Bhupinder Singh

98

11. Self Esteem, Well Being and Adjustment as Predictors of Achievement Motivation in Adolescents

Rupan Dhillon and Deepti Randhawa

106

12. Management of Frustration among Low Academic Achieving Arts Post-Graduate Students of Tripura University

Rajesh Ganesan and Moon Banerjee

115

SHORT COMMUNICATION

12. Menopause Anxiety Among Women

Rita Rani Talukdar and Sukanya Bora

125

EMPIRICAL VALIDATION OF PASS READING ENHANCEMENT PROGRAM: AN INDIAN EXPERIENCE

C.R. Darolia, Pardeep Kumar ** and Shashi Darolia ****

ABSTRACT

This investigation was conducted to empirically validate Das's PASS (Planning, Attention, Simultaneous and Successive processing) Reading Enhancement Program (PREP) on Indian children with reading and spelling deficits. The study was conducted on 147, 4th to 6th Grade students drawn from various schools in Karnal and Kurukshetra districts of Haryana, India. Children scoring below 16th percentile on particular Wide Range Achievement Test-4 (WRAT 4) and Das Battery of Cognitive Assessment System (CAS) subtests were diagnosed as having deficit in reading and spelling. These selected children were then assigned randomly to Control (n=74) and Experimental (n=73) groups. Both experimental and control groups were tested on CAS and WRAT 4 in pre- and post-test conditions. The experimental group received PREP remedial intervention program for 4 months and then was retested on a parallel form of WRAT 4 and CAS. Results revealed that control group did not differ in pre- and post-test conditions in any of the areas of reading, spelling, and PASS processes. However, the experimental group recorded remarkable improvement in reading ($t=7.98$, $p<.0001$), spelling ($t=6.44$, $p<.0001$) and simultaneous ($t=3.78$, $p<.001$) and successive synthesis ($t=6.32$, $p<.0001$). The findings provide an evidence for the validity of PREP in improving upon these areas of deficit among reading disabled children.

Key words: PASS, PREP, reading enhancement program, reading disabilities, cognitive assessment system.

INTRODUCTION

Learning disability is described as an individual's academic underachievement in reading, writing, and/or mathematics despite the presence of average to above

* Department of Psychology, Kurukshetra University, Kurukshetra (India).

** Department of Psychology, Lovely Professional University, Jalandhar (India).

*** Department of Psychology, University College, KU Kurukshetra (India).

average intelligence, appropriate instruction, regular school attendance, and favourable environmental factors. A number of researches have been conducted during the past decades, which were targeted to understand the causes and consequences of learning disabilities. Among others, the cognitive processing approach proposed by Das and his associates (Das, Naglieri, and Kirby, 1994) combines neuropsychological theory with elements from cognitive psychology to understand and mediate learning disability. Das's model proposes four distinct, though related, processes involved in human intelligence-the Planning, Attention, Simultaneous, and Successive processing (PASS). Das and Naglieri (1997) also developed the Cognitive Assessment System (CAS), as well as methods of intervention for reading disabilities. The present study aims to examine the effectiveness of an intervention program based on PASS Model in students with reading disabilities.

The PASS model involving Planning, Attention-Arousal, Simultaneous and Successive cognitive processing was first proposed by Das, Kirby and Jarman (1975) and later elaborated by Das, Naglieri and Kirby (1994) and Das, Kar and Parrila (1996). The PASS model as opposed to Spearman's 'g' theory of intelligence is based on the grounds that neuropsychological researches have consistently demonstrated that the brain is made up of interdependent, but separate, functional systems. Das seeking insight from Luria's (1966) seminal work on the modularization of brain functions and supported by decades of neuro-imaging research, describes intelligence into four interrelated cognitive processes. According to the PASS theory, information first arrives at the senses from external and internal sources, at which point the four cognitive processes activate to analyze its meaning within the context of the individual's knowledge base (e.g. semantic and episodic knowledge, implicit and procedural memories, and so on). In this sense the same information can be processed in many ways (Das, 2002).

In view of Das et al. (1994), planning is the ability to make decisions about how to solve problems and perform actions. It involves setting goals, anticipating consequences and using feedback. Planning also involves the attention-arousal, simultaneous and successive processing functions and is associated with the frontal lobes of the brain. Attention-arousal involves the ability to selectively attend to stimuli while ignoring other distractions. Individuals with Attention Deficit Disorder (ADD) have impairments in this area. The arousal functions are generally associated with the brain stem and thalamus, whereas the higher attentional processes are thought to be related to the planning functions of the frontal lobe. Simultaneous processing refers to the ability to integrate separate stimuli into a cohesive, interrelated whole. Simultaneous processing is necessary for language comprehension, as in: "Who is the person in the following statement: My mother's father was his only son (Naglieri and Das, 1997)?" The occipital and parietal lobes are thought to be important for these functions. Successive

processing involves the ability to integrate stimuli into a sequential order. An example of this process is the sequencing of letters and words in reading and writing. This type of processing is believed to be related to frontal-temporal lobe functioning.

In order to provide a fair measurement to PASS processes, Naglieri and Das (1997) developed the theoretical framework for a measurement instrument named as Naglieri-Das Cognitive Assessment System (CAS). This test is designed to provide a nuanced assessment of the individual's intellectual functioning, providing information about cognitive strengths and weaknesses in each of the four processes. This emphasis on processes (rather than abilities) makes it useful for differential diagnosis; unlike traditional full-scale IQ tests, the CAS is capable of diagnosing learning disabilities and Attention Deficit Disorder. It has been standardized for use with children and adolescents from age 5 to 17.

The PASS theory of cognitive processes has proven useful for both intellectual assessment (e.g. the CAS) and educational intervention. For example, the PASS theory provides the theoretical framework for the PASS Reading Enhancement Programme (PREP), a remediation curriculum designed to improve the planning, attention and information processing strategies that underlie reading (Das, 1999). The PREP is based on long research by Brailsford, Snart and Das (1984), Kaufman and Kaufman (1979), and Krywaniuk and Das (1976). These researchers showed that students could be trained to use simultaneous and successive processes more efficiently and thereby improve "their performance on that process and some transfer to specific reading tasks also occurred" (Ashman & Conway, 1997, p. 169). The current version of PREP makes the connection between successive and simultaneous cognitive processes and reading more explicit and includes more tasks that focus on successive processing than simultaneous processing. The PREP program includes tasks that are non-academic in content and do not require the student to read, but still illustrate the concept behind reading. Carlson and Das (1997) and Das, Mishra and Pool (1995) conducted studies of the effectiveness of PREP for children with reading decoding problems. Carlson and Das (1997) tested control and experimental groups before and after intervention using Word Attack and Word Identification and observed undisputed efficacy of the program. Similarly, Das et al. (1995) observed that PREP groups outperformed the control group.

METHOD

Participants

The participants for the study were drawn from various public schools in Yamal and Kurukshetra districts of Haryana (India). A total of 147 children with learning difficulties, specifically in Reading and Spelling in the age range of 9 to 12 years were identified from 4th to 6th grades in the selected schools. The

participants were randomly assigned to control ($n=74$) and experimental group ($n=73$). The subjects involved in the present study had attended at least 3 years formal curriculum of English language. However, none of the children spoke English as their first language at home and all of them learnt English as second language. This study had chosen 9-12 years age group of children as subjects of the study because this age is a crucial period for identifying children with learning difficulties especially in reading and writing or spelling.

Measuring Instruments

1. **Wide Range Achievement Test 4 (WRAT -4):** The Wide Range Achievement Test-Fourth Edition (WRAT-4) is designed to provide "a quick, simple, psychometrically sound assessment of academic skills" (Wilkinson & Robertson 2006). This study used the reading subtests of word reading, and spelling. This test is considered suitable to measure the poor English readers' reading ability level in Indian schools. There are two alternative forms that can be used interchangeably in the WRAT-4 which are the Blue Form and the Green Form. In this study, both the blue form and green form were used (Pre test - Green Form and Post Test - Blue Form) for comparable results. Wilkinson & Robertson (2006) had conducted an analysis in reliability for the WRAT-4 to ensure the internal consistency and the coefficients overall that showed high levels of ranging from 0.92 to 0.98. The test also has moderate levels of internal consistency within its subtests, with reliability coefficients ranging from 0.87 to 0.93.
2. **Cognitive Assessment System (CAS):** The cognitive functions of PASS were operationalised by Cognitive Assessment System (CAS), one of the latest technology based instrument in assessing the cognitive functions of brain. It was built in 1997 by Naglieri and Das. According to Naglieri (1999), "the single most important goal of the CAS is to encourage an evolutionary step from the traditional Intelligence Quotient (IQ), general ability approach to a theory-based, multidimensional view with constructs built on contemporary research in human cognition". CAS consists of four subscales Planning, Attention, Simultaneous and Successive which are the process of Luria's three functional units of brain or the theory of PASS. The four subscales comprise three subtests (in Standard Battery) and two subtests (in Basic Battery) for representing the whole score of the cognitive functions. The Basic Battery of CAS has been used in the present study. CAS reliability coefficient for standard battery is 0.96 and basic battery is 0.87. The average reliability coefficients for the four subscales are Planning (0.88), Attention (0.88), Simultaneous Processing (0.93), and Successive Processing (0.93).

Procedure

Participants were firstly assessed for reading and spelling subtests of WRAT-4 and then the PASS cognitive processes by CAS and then Cognitive Functions of PASS processes are Planning, Attention, Simultaneous and Successive; while reading processes are Word reading and Spelling. It took about 30 minutes for WRAT-4 while about 45 minutes to administer CAS. The basic battery of CAS was administered individually to assess cognitive processes and scores were obtained manually. In order to establish adequate rapport with each participant, the work was carried out in a separate room in the schools and maximum care was taken to avoid any external disturbances during task administration. Some instructions of research instruments had been translated into Hindi Language for better understanding of children in completing their tasks. CAS consists more of pictorial exposures, but some subtests of Simultaneous and Successive also include verbal items.

CAS and WRAT 4 scores were used to identify children with reading disabilities through determining cognitive strengths and weaknesses and achievement discrepancies. Then PASS Reading Enhancement Program (PREP) was applied on the experimental group over a period of 4 months and no intervention was given to the control group. There were 16 PREP sessions given to small groups of five children. CAS and WRAT 4 were administered pre and post treatment to see the effect of PREP Program. Alternative forms of WRAT 4 (Green and Blue) were used for pre and post treatment. However, some minor but important determinants of understanding such as technical instructions and conceptual explanations were considered for both tests during administration. Standard scores ($M = 100$, $SD = 15$) were obtained from the test manuals and used in all data analyses for both CAS and WRAT-4.

RESULTS

Table 1 presents the means, standard deviations, and t-ratios (paired samples) for the control group. The t-ratios were computed to examine significance of mean differences between the pre- and post-test conditions for all the variables included in the study. Results clearly showed that control group did not differ in pre and post-test conditions in performance on PASS processes, Reading, and Spelling. The values of t in control group were 0.96 for planning, 0.09 for attention, -0.19 for simultaneous, and 0.39 for successive processes, all with p greater than 0.05. Similarly the t values for reading and spelling subscales of WRAT 4 were 0.90 and 1.23, respectively being non-significant.

Table 1: Means, SDs and t-ratios for Pre and Post-treatment conditions (Control Group, N=74).

Variables	Pre Test		Post Test		<i>t</i>	<i>p</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
Planning	97.32	9.65	97.80	9.57	.96	.338
Attention	97.73	10.83	97.76	10.15	.09	.932
Simultaneous	95.09	12.79	95.00	12.72	-.19	.848
Successive	92.20	13.03	92.36	12.78	.39	.701
Reading	75.16	6.89	75.50	6.92	.90	.371
Spelling	75.76	6.25	76.32	6.71	1.23	.221

In the experimental group (Table 2) pre- and post-test scores differed significantly on simultaneous ($t = 3.78$, $p < .001$) and successive ($t = 6.32$, $p < .0001$) processes, post-test scores being higher. However, scores on planning ($t = 0.99$) and attention ($t = -0.65$) processes remained unaffected by PREP intervention. Performance on the target variables- reading and spelling, recorded substantial improvement with t-ratios of 7.98 ($p < .0001$) and 6.44 ($p < .0001$), respectively.

Table 2: Means, SDs and t-ratios for Pre and Post-treatment conditions (Experimental Group, N=73).

Variables	Pre Test		Post Test		<i>t</i>	<i>p</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
Planning	96.26	9.94	96.56	9.52	.99	.327
Attention	97.89	11.80	97.59	10.87	-.65	.519
Simultaneous	95.18	11.90	97.49	9.41	3.78	.001
Successive	91.03	11.06	95.15	7.37	6.32	.0001
Reading	72.07	7.11	75.92	7.55	7.98	.0001
Spelling	74.36	6.36	77.82	6.77	6.44	.0001

The findings of the study provide strong evidence of successful implementation of PREP in covering the deficit in reading and spelling of learning disabled children. Not only this, it is interesting to note that children showed significant improvement in performance on simultaneous and successive processes tests. These results are in tune with the observations of Ashman and Conway (1997) that the young children could be trained to use simultaneous and successive processes more efficiently and thereby improve their performance and the gain gets transferred to specific reading tasks also (p. 169). On these lines, Carlson and Das (1997) who used PREP for four months with children with reading disabilities demonstrated significant improvement in reading ability from pre- and

post-testing results. Generally, the reading-disabled children who receive this kind of remediation are found to gain almost equivalent to one year's growth in word-decoding ability within sixteen weeks of training (Das & Abbott, 1995). In an earlier study on Indian subjects, Das, Mishra and Pool (1995) found that PREP can be equally effective in classroom setting when instructions are imparted twice a week for about fifteen sessions.

Present data further support Parrila et al's (1999) observations that the PREP group gained more than the Meaning-Based group in terms of simple decoding skills. Results relating significant improvements in both single word reading as well as single word decoding along with improvement in two phonological tasks (Papadopoulos et al., 2003) and some abilities involved in cognitive processing (e.g., Das, 2012), especially in successive and simultaneous processing. Findings suggest unequivocally that the simultaneous and successive are the underlying cognitive processes for reading and spelling and therefore the remedial program which enhances these processes also directly affect reading and spelling. Thus, training tasks in PREP are aimed at improving the information processing strategies that underlie reading while avoiding the direct teaching of word-reading skills. The results in the present study go along with the above view and show an important role of PREP in improving simultaneous and successive processing, as well in reading and spelling as well among children with reading disabilities.

Accumulating research, in this direction, amply demonstrates that cognitive process-based training, such as PREP, has gained widespread academic credibility as an example of applied cognitive psychology. A number of process-based training programs are now available to remedial teaching. Unlike PREP, however, many of these have not been tested in controlled experiments, nor has their effectiveness been clearly linked to a theory. Schools, teachers, and parents need to consider such programs on the basis of underlying theory and consistent support from independent validation studies.

REFERENCES

- Ashman, A. F., & Conway, R. N. F. (1997). *An introduction to cognitive education: Theory and applications*. London: Routledge.
- Brailsford, A., Snart, F., & Das, J. P. (1984). Strategy training and reading comprehension, *Journal of Learning Disabilities*, 17, 287-290.
- Carlson, J., & Das, J. P. (1997). A process approach to remediating word decoding deficiencies in Chapter 1 children. *Learning Disabilities Quarterly*, 20, 93-102.
- Das, J. P. (2002). A better look at intelligence. *Current Directions in Psychological Science*, 11, 28-33.
- Das, J. P. (2012). *Reading Difficulties and Dyslexia: an interpretation for teachers*. New Delhi: Sage.
- Das, J. P., & Abbott, J. (1995). PASS: An alternative approach to intelligence. *Psychology and Developing Societies*, 7, 155-184.

- Das, J. P., Mishra, R. K., & Pool, J. E. (1995). An experiment on cognitive remediation or word-reading difficulty. *Journal of Learning Disabilities*, 28, 66-79.
- Das, J. P., & Naglieri, J. A. (1997). *Cognitive Assessment System*. Itasca, IL: Riverside.
- Das, J. P., Kar, B. C., & Parrila, R. K. (1996). *Cognitive planning*. Thousand Oaks, CA: Sage.
- Das, J. P., Kirby, J. R., & Jarman, R. F. (1975). Simultaneous and successive syntheses: An alternative model for cognitive abilities. *Psychological Bulletin*, 82, 87-103.
- Das, J. P., Naglieri, J. A., & Kirby, J. R. (1994). *Assessment of cognitive processes*. Needham Heights, MA: Allyn and Bacon.
- Das, J. P. (1999). *PREP: PASS Reading Enhancement Program*. Deal NJ: Sarka Educational Resources.
- Kaufman, D., & Kaufman, P. (1979). Strategy training and remedial techniques. *Journal of Learning Disabilities*, 12, 63-66.
- Krywaniuk, L.W., & Das, J. P. (1976). Cognitive strategies in native children: Analysis and intervention. *Alberta Journal of Educational Research*, 22, 271-280.
- Luria, A. R. (1966). *Higher cortical functions in man*. New York: Basic Books.
- Naglieri, J.A. (1999). *Essentials of CAS Assessment*. New York: John Wiley & Sons.
- Naglieri, J. A., & Das, J. P. (1997). *Cognitive assessment system interpretive handbook*. Chicago: Riverside Publishing Company.
- Papadopoulos, T. C., Das, J. P., Parrila, R. K., & Kirby, J. R. (2003). Children at risk for developing reading difficulties. *School Psychology International*, 24, 340-366.
- Parrila, R. K., Kendrick, M. E., Papadopoulos, T. C., & Kirby, J. R. (1999). Efficacy of cognitive reading remediation program for at-risk children in grade 1. *Developmental Disabilities Bulletin*, 27, 1-31.
- Wilkinson, G.S., & Robertson, G.J. (2006). *Wide Range Achievement Test (WRAT-4): Professional Manual*. Psychological Assessment Resources (PAR), Inc.

COGNITIVE REPRESENTATION OF ILLNESS, COPING AND WELLBEING IN CANCER PATIENTS

Anubhuti Dubey* & Nisha Kumari**

ABSTRACT

Cancer can have substantial psychological consequences, but there has been a fewer researches in India looking at patients' beliefs about their condition and how they relate to psychological well being and quality of life (QoL). Hence, the present endeavour has investigated the relationships between cognitive representation of illness, coping, psychological well being and QoL in patients getting treatment for either mouth/neck cancer (M & N) or breast cancer. In total, 120 individuals with [60 mouth or neck cancer patients (all male) and 60 breast cancer patients (all female)] had participated (Mean age=47.70 years). Participants completed questionnaire comprising the Revised Illness Perception Questionnaire, WHO Quality of life (QoL) scale, Ryff Psychological well being questionnaire and the brief COPE. The findings indicated significantly different illness perception and use of coping strategies by two types of cancer patient groups. Furthermore, these groups had been differently evaluating their well being. The results of stepwise multiple regression analysis showed that four components of illness perception scale i.e. timeline, consequences, emotional response and overall illness perception had emerged as significant predictors of psychological well being and emotional response, whereas illness perception had emerged as significant predictors of QoL. The cognitive representation of illness had negative impact on well being. The strong relationships found between patients' beliefs about their condition and well being suggests that health professionals should recognize the psychological impact of cancer and address negative beliefs and emotions surrounding the condition in treatment programmes.

* Professor, Department of Psychology, DDU Gorakhpur University, Gorakhpur-273009 (U.P.), India

** Research Scholar, Department of Psychology, DDU Gorakhpur University, Gorakhpur-273009 (U.P.), India

Keywords: Cancer, cognitive representation of illness, coping, psychological well being, quality of life.

INTRODUCTION

Cancer is one of the critical health problems intimidating health concerns in the whole world. India, United States and China all together comprise approximately one third of the global breast cancer burden (Statistics of Breast Cancer in India, 2015). The prevalence of mouth/neck cancer in males and breast cancer in females is rising in India. World Health Organization prediction for 2015 is that there will be an estimated 1,55,000 new cases of breast cancer and about 76000 women are expected to die of the disease ((Statistics of Breast Cancer in India, 2015). The unpredictability of cancer of any type and accompanied by its decidedly evident nature can result in extensive distress for individuals with both breast and neck cancer. As breast is an important component of identity, womanhood and self-image, loss can lead to a variety of psychological difficulties and negative impact on quality of life (QoL) (Dubey & Tripathi, 2015).

A crucial facet of theory and research in health psychology has to do with the fundamental question of how individuals' presume and interpret health threats. This in itself is the study of health and illness representations. Moreover, the self-regulatory model proposes that health-related behaviours are clearly shaped by ideas around definite themes, such as illness representations. The self-regulation model, a widely held approach to get the picture of chronic illnesses intended that when dealing with illness condition individuals' actively construct a representation of their state which is used to regulate coping and health-related behaviour (Leventhal, Brissette & Leventhal, 2003; Horne & Weinman, 2002). Leventhal and colleagues (1980) had recognized five components of illness perceptions which lead to coping and appraisal, namely, identity, timeline, cause, cure/control and consequences. The *identity* is beliefs about symptoms and the disease label. It can be contended that people like to have a label for their symptoms (for legitimization); *cause*, thoughts about how the disease has developed; *timeline*, anticipations about the characteristic illness course. These beliefs will be re-evaluated as time progresses, and it has been suggested 'Inside every chronic patient is an acute patient wondering what happened' (Brown, 2002); *consequences*, beliefs about illness outcome; and *cure/control*, beliefs about recovery or control of the disease. In addition, the self-regulation model suggests that emotional representations proceed concurrently with cognitive representations to guide people's responses to illness. In a nutshell, the self-regulatory model see the health-related behaviour and adaptation as the result of an ongoing process in which, patients' assimilate the internal and external illness information with existing cognitive structures to construct an illness representation. Illness representations are in effect cumulative, with information being adopted, discarded or adapted as necessary.

Based around distinct components, these representations direct coping. Therefore, they are expected to be linked to the selection of coping procedures, action, plans and outcomes. Researchers have been keen to determine how illness representations might influence both coping and outcomes in a diverse range of chronic diseases, including chronic fatigue syndrome (CFS) (Moss-Morris, Petrie & Weinman, 1996), Addison's disease (Heijmans, 1999), psoriasis (Fortune, Richards, Main, & Griffiths, 2000), multiple sclerosis (Vaughan, Morrison & Miller, 2003) and rheumatoid arthritis (RA) (Treharne, Lyons, Booth & Kitas, 2005). The premise is that illness representations are related to coping efforts, and via these efforts to outcomes, i.e. coping acts as a mediator. However, research currently seems to indicate that illness representations may be associated with outcomes 'relatively' independent of the coping strategies used (Hagger & Orbell, 2003). Yet, this conclusion must be cautious that the direction of relationships might not be clear-cut as coping responses could influence illness representations which may then feedback to influence choice of coping strategy (Moss-Morris, Petrie & Weinman, 1996).

Moss-Morris, Petrie and Weinman (1996) had reported a range of significant relationships between illness representations, as measured by their Illness Perception Questionnaire (IPQ) and coping, as measured by the COPE scale (Carver, Scheier & Weintraub, 1989). Similar findings were reported for patients with a recent myocardial infarction (Petrie, Buckley & Weinman, 1995). Both illness representations and coping were found to be directly related to disability and psychological well-being. However, illness representations were stronger predictors of outcome than coping variables, accounting for 37 per cent and 19 per cent of outcome variance respectively.

The physical and psychological functioning of patients with a chronic illness varies strongly, even between patients with the same medical condition. The measurement of individual patients' health-related quality of life (HRQL) can be used in clinical practice to facilitate detection of physical or psychological problems, to monitor disease and treatment over time, and thus improve the delivery of medical care. As, Scharloo and associates (1998) stated that cognitive representations of illness were significantly related to physical, psychological and social functioning in all chronic illness groups; thus, the quality of life could better explain the illness representations. Also, Brook (2013) did a meta-analysis of the researches exploring illness perceptions measured by the Illness Perception Questionnaire (IPQ) or the Revised IPQ (IPQ-R); health outcomes included mental health and quality of life. Illness perceptions were significantly associated with health outcomes (Correlation 0.247, 95% CI, 0.176-0.314, $p=0.001$). Higher reporting of identity, chronic timeline, consequences and emotional representations were associated with higher reporting of anxiety, depression and stress. Higher reporting of personal and treatment control were associated with lower reporting of anxiety, depression and stress. Patterns of illness perceptions and coping,

coping and health outcomes did not remain significant in the meta-analysis; therefore coping did not meet the criteria of mediation.

Cancer can have significant psychological consequences, but there has been a fewer researches in India looking at patients' beliefs about their condition and how they relate to psychological well being and quality of life (QoL). Hence, the present endeavour had tried to investigate the relationships between cognitive representation of illness, coping, psychological well being and QoL in patients getting treatment for either mouth/neck cancer or breast cancer.

The present research addresses the following research questions-

- 1 How do two types of cancer patients perceive their illness, in terms of causes, timeline, control, consequences, coherence, and emotional representations?
- 2 To what extent do illness perceptions relate to the way two types of cancer patients are coping with their illness?
- 3 To what extent do illness perceptions relate to the evaluation of psychological well being and quality of life in two types of cancer patients?

Hypotheses

Although this study is mainly explorative in nature, we have formulated the following hypotheses with respect to the second research question: perceptions of one's cancer as being more controllable (by medical treatment and/or self-management) and more coherent (better understanding of the illness) shall relate to the use of more active coping strategies (i.e., moving toward the stressor), whereas perceptions of the illness as having more negative consequences and being more emotionally loaded shall relate to the use of more passive coping strategies (i.e., withdrawing from the stressor).

METHOD

Sample

For the purpose of this study, a random sample was drawn from the Hanuman Prasad Cancer Hospital and BRD Medical College, Gorakhpur. Inclusion criteria were: a diagnosis of mouth/neck/breast cancer (all tumour types with an expected 5-year survival rate of $\geq 20\%$) and being aged ≥ 18 years at diagnosis and the exclusion criteria were: a post-diagnosis time span of more than 15 years and the presence of distant metastases at time of diagnosis. A total of 120 cancer patients [60 mouth and neck cancer patients (all male) and 60 breast cancer patients (all female)] were presented to the medical specialists involved in the care for these patients to check on additional exclusion criteria, such as patients' inability to participate because of severe mental disorder, intellectual disability, illiteracy, or terminal illness. The mean age of the patients was 47.70 years and all of them were married. The patients had given an informed consent to participate in the study.

Measures

Illness Perception Questionnaire (IPQ-R): To assess cognitive and emotional representations of cancer, the Hindi version of the revised Illness Perception Questionnaire (IPQ-R) adapted by Srivastava and Kumar (2014) was used. The original IPQ-R was developed by Moss-Morris, Weinman, Petrie, Horne, Cameron, & Buick, (2002). The IPQ-R consists of seven scales: (1) Timeline: acute-chronic, (2) Causal attribution (3) Consequences, (4) Personal control, (5) Treatment control, (6) Illness coherence, (7) Emotional representations. The Causal attributions scale had Psychological attributions, Risk factors, and Immunity and two single Causal attribution items. We did not use an Identity scale ('label' and presence of symptoms attributed to the illness) because it was not possible to compose one that is applicable to our total sample (i.e., people with different types of cancer). Items are scored on 5- point Likert scales, ranging from 'strongly disagree' (1) to 'strongly agree' (5). All scales demonstrated good internal reliability with Cronbach's alphas ranging from 0.57 to 0.85 (Srivastava & Kumar, 2014).

WHO QoL BREF: This is a 26-item measure developed by WHO team would consisting of four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items); and two overall QOL and general health items. The physical health domain includes items on mobility, daily activities, functional capacity and energy, pain, and sleep. The psychological domain measures self-image, negative thoughts, positive attitudes, self-esteem, mentality, learning ability, memory and concentration, religion, and the mental status. The social relationships domain contains questions on personal relationships, social support, and sex life. The environmental health domain covers issues related to financial resources, safety, health and social services, living physical environment, opportunities to acquire new skills and knowledge, recreation, general environment (noise, air pollution, etc.), and transportation. All scores are transformed to reflect 4 to 20 for each domain with higher scores corresponding to a better QOL. There is no overall score for the WHOQOL-BREF. The retest reliability of the Hindi version of the scale was sought and found ($r=0.79$) by Dubey (2003).

Coping Operation Preference Inquiry (COPE- Short Version): It measures the dispositional coping style. The short version of the scale was developed by Carver, Scheier and Weintraub (1998). Cope consists of 28 items that were divided into fourteen subscales having two items in each scale. Each scale emphasized a particular aspect of coping. This inventory measures a wide range of potential responses to stressors and also distinguishes each coping strategy. Different stressful events bring out somewhat different patterns of responses. Respondents were asked to indicate how they would react to stressors they encountered. They were asked to give, their responses on a 4 point scale as

—(1) I usually don't do this at all (2) I usually do this a little bit (3) I usually do this a medium amount (4) I usually do this a lot. The Cronbach alpha was .54 to .90 for the fourteen subscales was found. Name of subscales are active coping, planning, suppression of competing activities, restraint coping, seeking social support for instrumental reasons, seeking social support for emotional reasons, focus on venting of emotions, behavioural disengagement, mental disengagement, positive reinterpretation and growth, denial, acceptance, religion, alcohol or drug use and humour.

Psychological Well being: Developed by Ryff (1989), this scale has six subscales i.e. Self-Acceptance, Environmental Mastery, Positive Relations With Others, Personal Growth, Purpose in Life, and Autonomy. Each scale consisted of three items, with a mix of positive and negative items. Participants responded using a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree), giving a potential range of 18–108. Six items are reverse scored. Cronbach's alphas for the overall sample were .73 for autonomy, .75 for environmental mastery, .78 for personal growth, .79 for positive relations with others, .69 for purpose in life, and .81 for self-acceptance, all of which are highly impressive given that these are three-item subscales.

Procedure

All participants provided informed consent; informed of their right to withdraw from the study, and were debriefed upon completion. A set of questionnaires had been given to the participants. The data was collected individually and it took around 40–45 minutes with each of the participants. After taking their responses thanks were given to them for their cooperation. The data was subjected to statistical analysis using computer software.

RESULTS

To examine whether the illness perceptions, coping strategies and related well being of cancer patients depend on their type of cancer, the analysis of variance was computed. To determine the effects of illness perceptions on coping and well being we conducted a series of multiple regression analyses. In one set of regression analysis different illness perception scales were entered as predictors and psychological well being as criterion variable and for another set of regression analysis the predictors were same but the criterion were different coping strategies. All analyses were performed using SPSS 20.00 version. Due to the number of relationships examined, the $p < .01$ significance level was adopted for these and later calculations to avoid Type 1 error.

Significant differences emerged in cognitive representation of illness in two types of cancer patients. Table 1 contains the means and F ratio of IPQ-R scale scores. It shows a relatively high mean on the scale 'Timeline: acute-chronic' for M & N group in comparison to breast cancer group. This indicated that many

of the M & N group participants perceive their illness to continue for a long time but that there were also participants with another opinion in this respect. The high mean scores on the scales 'Treatment control' and 'Illness coherence' indicated that M & N group participants have a strong belief in the effectiveness of the cancer treatment and believe that they understand their illness rather well than breast cancer patients. It should be noticed that, in general, M & N group patients perceive their 'Personal control' over the illness to be much lower than the breast cancer group. Regarding 'causal attributions', relatively low scores on the 'Psychological' scale indicated that M & N group participants did not perceive psychological factors to be a major cause of their illness. In contrast, they attribute their illness more to chance or bad luck, although there was some variety among the scores in this respect. The M & N group patients were more emotional to their condition scoring high on 'Emotional response' and perceiving more negative 'consequences' than breast cancer patients (Table 1).

Table 1: Mean, S.D. and F ratio of Cognitive representation of Illness

Cognitive representation of Illness	Mouth & Neck Cancer Group (M&N)		Breast Cancer Group		F ratio	Sig.
	Mean	S.D.	Mean	S.D.		
Consequences	23.56	3.18	15.90	5.50	86.13	.000
Personal control	13.91	4.24	22.63	3.08	165.77	.000
Treatment control	22.90	2.51	17.18	4.41	75.89	.000
Illness coherence	16.73	3.82	13.83	4.19	17.86	.000
Timeline	19.66	4.34	10.13	5.28	116.55	.000
Emotional response	24.56	2.61	15.83	4.57	164.92	.000
Causal attribution	16.61	4.90	33.06	8.03	183.23	.000

Table 2: Mean, S.D. and F ratio of Coping Strategies

Coping Strategies	Mouth & Neck Cancer Group		Breast Cancer Group		F ratio	Sig.
	Mean	S.D.	Mean	S.D.		
Self distraction	5.13	1.44	5.66	1.52	3.86	.05
Active coping	5.55	1.53	5.73	1.47	5.52	.02
Denial	5.60	1.44	5.76	1.53	4.88	.02
Substance use	5.51	1.39	5.64	1.36	.21	.64
Emotional social support	5.10	1.32	4.98	1.54	.19	.65
Instrumental social support	5.43	1.68	6.21	1.45	7.46	.007
Behavioural disengagement	5.23	1.57	5.48	1.50	.79	.37

Venting	5.13	1.67	5.26	1.53	.20	.65
Positive reframing	5.30	1.67	5.33	1.55	.01	.91
Planning	5.26	1.50	4.50	1.42	7.80	.006
Humour	4.88	1.50	4.96	1.53	.09	.76
Acceptance	4.25	2.04	4.46	1.80	.37	.54
Religion	4.91	1.79	5.26	1.52	1.36	.25
Self blame	5.46	1.44	4.03	1.54	12.97	.000

The cancer patients afflicted with two different types of cancer were using some coping strategies significantly more than other group. Table 2 hold the mean and F ratio of different coping strategies used by the participants, which suggested that active coping, instrumental social support, planning, self distraction and denial was used significantly more by breast cancer patients, however, self blame was more used by M & N group. Rest of the coping strategies assessed by the COPE scale was almost equally used by both groups (Table 2).

Table 3: Mean, S.D. and F ratio of Well-being

Well being	Mouth & Neck Cancer Group		Breast Cancer Group		F ratio	Sig.
	Mean	S.D.	Mean	S.D.		
Psychological well being	70.26	9.88	76.48	9.44	12.40	.001
Qol	63.73	5.89	67.13	4.83	11.92	.001

Table 3 presents the mean and F ratio of psychological well being and quality of life. The M & N group of cancer patients were evaluating their psychological well being as well as quality of life significantly less than breast cancer patients.

Table 4 presented the how were the dimensions of illness perception were predicted the use of different coping strategies by patients afflicted with two different cancers. Firstly, the coping strategies predicted by illness perception in both M & N and breast cancer group had been reported, followed by only M & N group and then only breast cancer group.

It was found that causal attribution and consequences had positively and significantly predicted self distraction coping strategies in M & N group and breast cancer group respectively. The causal attribution had explained 10.8% variance in criterion variable self distraction in M & N group. The perception of consequences had explicated 5.9% variance in criterion variable self distraction in breast cancer group.

Table 4: Cognitive representation of illness as predictors of Coping Strategies

Criterion: Coping Strategies	Groups	Predictors	R	R ²	R ² change	β	t	F
Self Distraction	M & N Breast	Causal Attribution Consequences	.32 .40	.108 .059	.108 .059	.32 .24	2.62** 2.00**	7.00** 5.70**
Seeking Emotional Social Support	M & N Breast	Emotional response Consequences	.28 .39	.083 .071	.083 .071	.31 .27	2.59** 2.18**	5.22** 5.16**
Seeking Instrumental Social Support	M & N Breast	TimelineCyclical Consequences	.29 .28	.085 .083	.085 .083	.29 .29	2.32** 2.32**	5.38** 5.38**
Positive reframing	M & N Breast	Illness Coherence Treatment control	.31 .40	.097 .070	.097 .070	.33 -.26	2.76** -2.19*	6.21** 5.69**
Planning	M & N Breast	Treatment control Treatment control	.30 .27	.095 .075	.095 .075	-.30 .27	2.46** 2.17**	6.09** 4.71**
Substance use	M & N Breast	Treatment control Treatment control	.30 .29	.095 .087	.095 .087	-.30 -.31	2.46** 2.57**	6.09** 5.52**
Active Coping	M & N	Personal control	.38	.151	.084	.25	2.06**	5.05**
Venting offEmotions	M & N	Treatment control	.29	.086	.086	-.29	2.33**	5.44**
Religion	M & N	Treatment control	.30	.094	.094	-.30	2.45**	6.03**
Self Blame	M & N	Personal Control	.31	.097	.097	-.31	-2.50	6.25
Acceptance	M & N	Personal control	.25	.067	.067	-.25	2.04**	4.17**
Behavioural disengagementment	Breast	Consequences	.38	.146	.146	-.38	-3.14**	9.91**
Denial	Breast	Causal attribution	.30	.091	.091	.30	2.41**	5.83**
	Breast	Timeline cyclical	.31	.102	.102	.31	2.56**	6.58**

P<.05*

Note - P<.01**

Furthermore, emotional response and consequences had positively and significantly predicted seeking emotional social support coping strategy in M & N group and breast cancer group respectively. The emotional response had explained 8.3% variance in criterion variable seeking emotional social support coping in M & N group. The perception of consequences had explicated 7.1% variance in criterion variable seeking emotional social support coping in breast cancer group.

Additionally, timeline and consequences had positively and significantly predicted seeking instrumental social support coping strategy in M & N group and breast cancer group respectively. The timeline had accounted for 8.5% variance in criterion variable seeking instrumental social support coping in M & N group. The perception of consequences had contributed 8.3% variance in criterion variable seeking instrumental social support coping in breast cancer group.

Moreover, illness coherence and treatment control had significantly predicted positive reframing coping strategy in M & N group and breast cancer group respectively. The illness coherence had positively explained 9.7% variance in criterion variable positive reframing coping in M & N group. The treatment control had negatively explicated 7.0% variance in criterion variable positive reframing coping in breast cancer group.

In addition, treatment control had significantly predicted planning coping strategy in both M & N group and breast cancer group. However, the treatment control had negatively explained 9.5% variance in criterion variable planning coping strategy in M & N group but positively explicated 7.5% variance in criterion variable in breast cancer group. Besides this, treatment control had also significantly predicted substance use coping strategy in both M & N group and breast cancer group. In cancer patient group personal control also predicted substance use along with treatment control and these two variables together explained 17.1% variance. However, the treatment control had negatively explained 9.5% and 8.7% variance in criterion variable substance use coping strategy in M & N group and breast cancer group respectively. The personal control had positively accounted for 8.4% variance in the application of substance use coping strategy.

Active coping, venting off emotions, self blame and religion were the coping strategies which were significantly predicted by two illness perception dimensions i.e. treatment control and personal control in M & N group only. Table 4 showed that the perception of treatment control had negatively predicted 8.6% variance in the use of active coping strategy and 9.4% variance in the use of venting off emotions. Similarly, personal control had negatively explained 9.7% variance in the use of religion coping strategy and 6.7% variance in the use of self blame coping strategy.

Acceptance, behavioural disengagement and denial were the coping strategies which were significantly predicted by different illness perception dimensions in

breast cancer patient group only (Table 4). The perception of consequences had significantly and negatively explained 14.6% variance in the use of acceptance coping strategy. The causal attribution of illness perception dimension had significantly and positively explained 9.1% variance in the use of behavioural disengagement coping strategy. The perception of timeline cyclical had significantly and positively explained 10.2% variance in the use of denial coping strategy.

Table 5: Cognitive representation of illness as predictors of Wellbeing

Criterion	Groups	Predictors	R	R ²	R ² change	β	t	F
Psychological well being	M & N	TimeLine	.27	.07	.077	-.27	-2.19**	4.02**
	Breast	Consequences	.62	.38	.389	-.62	-6.08**	36.96**
Quality of Life	M & N	Emotional response	.35	.12	.125	.36	2.87**	8.27**
	Breast	Illness Perception	.49	.12	.122	-.35	-3.04**	9.35**

Note - P<.01**

P<.05*

Psychological well being had been predicted by timeline and consequences in M & N group and breast cancer group respectively. The timeline had negatively explained 7.7% variance in criterion variable psychological well being in M & N group. The consequences had negatively explicated 38.9% variance in criterion variable psychological well being in breast cancer group. Similarly, QoL had been predicted by emotional response and illness perception in M & N group and breast cancer group respectively. The emotional response had positively explained 12.5% variance in criterion variable QoL in M & N group. The illness perception had negatively explicated 12.2% variance in criterion variable QoL in breast cancer group (Table 5).

DISCUSSION

The onset of illness gives rise to a range of problems, which can vary greatly from patient to patient, even in those with the same condition. In recent years health psychologists have shown that, in order to make sense of and respond to these problems, patients create their own models or representations of their illness. Examination of the relationships between cognitive representations of illness, coping and well-being in the two groups of cancer patients (M & N, and Breast Cancer) revealed certain significant findings.

Patients with higher Time-line scores are less likely to see their illness as potentially controllable or curable and to have more severe personal consequences. Patients with mouth and neck cancer who perceived their illness as chronic were using instrumental social support as a coping strategy. Since the prognosis as well as living with mouth and neck cancer is not very satisfactory, hence the

patients try to seek external support. While, when perceiving their disease as cyclic, breast cancer patients adopted denial coping strategy. They question that it cannot happen again.

The consequences component of illness perception was related to patients' ideas about the illness severity and probable impact on their physical, social, psychological functioning, including both the long-term and short-term effects of cancer. The findings revealed that M&N cancer patients tend to perceive more negative consequences of their illness as compared to breast cancer patients, the possible cause being better prognosis rate of breast cancer treatment, cure and survival when diagnosed in early stages. The breast cancer patients heard a number of successful treatment and survival stories from their doctors and other people and formed their perception accordingly. This was stated by them during interview. They also recognize their illness to have better long-term outcomes; hence they espouse seeking emotional and instrumental support coping for adapting to the situation. As stated earlier about the prognosis and difficulty in living with mouth and neck cancer, these patients perceive their illness to be dreadful; hence, they employ self-distraction coping strategy. Thus, this finding is supported by results of Petrie, and associates (1996) that patients who believe that their illness was not curable were likely to attend rehabilitation programs. At the same time, the breast cancer patients also seek for acceptance coping strategy but only when they foresee negative consequences of illness.

Cure/ controllability part designates the degree to which patients believe their condition is acquiescent to cure or control. It encompasses both personal and treatment control, as Buick (1997) puts that patient's illness perceptions were found to guide treatment behaviours. The M&N cancer patients observe now that they have low personal control over their illness and subsequently they utilize religion and self-blaming strategies. On the other hand, the breast cancer patients take on substance use, considering personal control on illness. The M&N cancer patients adhere and believe in treatment and thus they adopt inactive coping and find expression for their emotions. Breast cancer patients adopt planning and positive reframing with low substance use, as they do not believe much in treatment, rather they perceive their own personal control on illness. The findings are consistent with the results of Heijmans and Ridder (1999) that states that the personal control dimension tends to be positively related to adaptive outcomes and negatively related to maladaptive outcomes.

Patient's cognitive representation of illness also comprises the perception of patient about the causes of illness. Jirojwong and associates (1994) found in their study that patients perceive previous actions to be the cause of their illness. The M&N cancer patients attribute the causes of their illness not to psychological factors, but to luck and chance. Thereby, they make use of self-distraction coping

strategies. Whereas, the breast cancer patients attribute to external causes and show acceptance towards illness.

Leventhal's (1984) self-regulation model states that cognitive components and emotional components are separate, parallel processes, and lead to coping. However, findings reveal high emotional responses in M&N patients, who also seek for emotional social support. This finding could be explained in context of research by Wellisch and associates (1999), who established that in Asian cultures, cancer is viewed as disease brought on by character weaknesses, genetic predispositions, and perhaps by personal lifestyle choices. Also, the Asian perspective of personal, intrinsic moral causation of cancer could discourage seeking medical advice and social support outside one's immediate circle because of the attached stigma. Illness coherence, also a dimension of illness representation, indicates the overall meaning of the illness to the patient. Illness coherence in M&N cancer patients is found to be high whereby they adopt positive reframing coping strategy.

Thus, we can infer that the only hypothesis of the study is accepted which states that perceptions of one's cancer as being more controllable (by medical treatment and/or self-management) and more coherent (better understanding of the illness) relate to the use of more active coping strategies (i.e., moving toward the stressor), whereas perceptions of the illness as having more negative consequences and being more emotionally loaded relate to the use of more passive coping strategies (i.e., withdrawing from the stressor). Rutter and Rutter (2002) and Heijmans (1999) also found in their study that the cognitive representation dimensions identity, consequences and timeline have positive relationships with passive and emotion-focused coping strategies such as avoidance, denial, cognitive reappraisal and venting emotions. Furthermore, the results revealed that the more controllable an illness is perceived, the more problem-focused coping strategies are used as active coping.

The findings of study by Orbell and Hagger (2003) reveal that strong positive relationships exist between the cognitive representation dimensions identity, serious consequences and timeline, and maladaptive outcomes such as anxiety and depression, and stress also tend to be negatively related to adaptive outcomes such as functioning and psychological well-being. Thus, the study also attempted to know as to what extent does illness perceptions relate to the evaluation of psychological well being and quality of life by two types of cancer patients. The findings revealed that psychological well being is negatively affected in M&N cancer group as they perceive their illness to be chronic. While, well-being is found to be better in breast cancer patients as predicted by perceiving positive consequences of their illness. Similarly, Quality of life in breast cancer group is slightly better than M&N group patient and is predicted by illness perception. While, if M&N group bear negative emotional responses towards their illness, then their quality of life is affected.

REFERENCES

- Brown, F.M. 3rd (2002). Inside every chronic patient is an acute patient wondering what happened. *Journal of Clinical Psychology*, 58, 1443-9.
- Brook, R., Appel, L., Rubenfire, M. (2013). Beyond medications and diet: Alternative Approaches to Lowering Blood Pressure: A Scientific Statement From the American Heart Association. *Hypertension*.
- Buick, D.L. (1997). Illness representations and breast cancer: Coping with radiation and chemotherapy. In: Petrie, K.J. and Weinman, J.A. (Eds.), *Perceptions of Health and Illness*, pp. 379-409.
- Carver, C S, Scheier, M F and Weintraub, J K, (1989). Assessing coping strategies: A theoretically- based approach. *Journal of Personality and Social Psychology*, 56, pp. 267-283.
- Dubey, A. & Tripathi, K.M. (2015). Psychological distress and quality of life in women with diabetes and cancer. In A. Shukla and A. Dubey (Eds.) *Mental Health Psychosocial –Social Perspectives: Issues and interventions* (Vol One) (pp. 54-68), New Delhi: Concept publishing Company.
- Fortune, D. G, Richards, H. L., Main, C. J., & Griffiths, C. E. (2000). Pathological worrying, illness perceptions and disease severity in patients with psoriasis. *British Journal of Health Psychology*, 5(1), 71-82.
- Hagger, M.S. & Orbell, S.(2003). A meta-analytic review of the common-sense model of illness representations. *Psychology of Health*, 18, 141-84.
- Heijmans, M. (1999). The role of patients' illness representations in coping and functioning with Addison's disease. *British Journal of Health Psychology*, 4, 137-49.
- Horne, R., & Weinman, J. (2002). Self-regulation and self-management in asthma: exploring the role of illness perceptions and treatment beliefs in explaining non-adherence to preventer medication. *Psychology and Health*, 17(1), 17-32.
- Jirojwong, S., Thassri, J., Skolnik M. (1994) Perception of illness and use of health care givers among cervical cancer patients at Songkla Nagarind Hospital. A study in southern Thailand. *Cancer Nurs*, 17, 395-402.
- Leventhal, H., Nerenz, D., & Steele, D.J. (1984) Illness representations and coping with health threats. In *Handbook of Psychology and Health*, 219-52.
- Leventhal, H., Brissette, I., & Leventhal, E. A. (2003). The common-sense model of self-regulation of health and illness. *The self-regulation of health and illness behaviour*, 1, 42-65.
- Leventhal, H., Myer, D. & Nerenz, D. (1980). The common sense model of illness danger. In S.Rachman (Ed) *Contributions to Medical Psychology*, 2, 7-30.
- Moss-Morris, R., Petrie, K.J., & Weinman, J. (1996). Functioning in chronic fatigue syndrome: do illness perceptions play a regulatory role? *British Journal of Health Psychology*, 1, 15-25.
- Moss-Morris, R., Weinman, J., Petrie, K., Horne, R., Cameron, L., & Buick, D. (2002). The revised illness perception questionnaire (IPQ-R). *Psychology and health*, 17(1), 1-16.
- Petrie, K. J., Moss-Morris, R., Weinman, J. (1995). The impact of catastrophic beliefs on functioning in chronic fatigue syndrome. *Journal of Psychosomatic Research*, 39, 31-37.

- Petrie, K.J., Weinman, J., Sharpe, N., & Buckley, J. (1996). Role of patients' view of their illness in predicting return to work and functioning after myocardial infarction: longitudinal study. *British Medical Journal*, 312, 1191-1194.
- Rutter, C. L. & Rutter, D. R. (2002). Illness representation, coping and outcome in irritable bowel syndrome (IBS). *British Journal of Health Psychology*, 7, 377-391.
- Scharloo, M., Kaptein, A. A., Weinman, J. A., Hazes, J. M. W., Willems, L. L. N. A., Bergman, W., & Rooijmans, H. G. M., (1998). Illness perceptions, coping and functioning in patients with rheumatoid arthritis, chronic obstructive pulmonary disease and psoriasis. *Journal of Psychosomatic Research*, 44, 573-585.
- Treharne, G.J, Lyons, A.C., Booth, D.A., & Kitas, G.D. (2005). Predicting fatigue in rheumatoid arthritis: the impact of psychosocial resources 1 year earlier. *Annals of Rheumatic Diseases*, 64 Suppl. 3, 582.
- Vaughan, R., Morrison, L., & Miller, E. (2003). The illness representations of multiple sclerosis and their relation to outcome. *British Journal of Health Psychology*, 8, 287-301.
- Wellisch, D., Kagawa-Singer, M., Reid, S.L., Lin, Y.J., Nishikawa-Lee, S., & Wellisch, M. (1999). An exploratory study of social support: A cross- cultural comparison of Chinese-, Japanese-, and Anglo- American breast cancer patients. *Psycho-Oncology*, 8, 207-219.

HEALTH HARDINESS AND ILLNESS PERCEPTIONS IN TYPE 2 DIABETES PATIENTS

Kavya Chelli, R. Lalnuntluangi** and Meera Padhy****

ABSTRACT

Illness perceptions that the patients have about their illness and health hardiness play a significant role in various health outcomes in patients. Assessing these two constructs in type 2 diabetes patients might be helpful in designing health promotion strategies, which in turn influence better management of the condition. With this background the study was intended (1) to assess the relationship between health hardiness and illness perceptions and (2) to find out the impact of the health hardiness on illness perceptions in type 2 diabetes patients. Utilizing a correlational design seventy seven individuals with type 2 diabetes were recruited in the study and were administered revised health hardiness inventory-24 and illness perception questionnaire-revised. The results revealed a significant difference between symptoms experienced and symptoms attributed to type 2 diabetes. Both significant positive and negative correlations were observed between health hardiness and illness perceptions. Health hardiness explained significant proportion of variance in illness perceptions. The limitations and implications of the study are discussed.

Key words: Health hardiness, illness perceptions, type 2 diabetes

-
- * Research scholars, Centre for Health Psychology, University of Hyderabad, Central University, Prof C.R. Rao Road; Gachibowli; P.O., Hyderabad - 500046; Telangana; (India), Email ID:kavyahcu@gmail.com, teteyralte@yahoo.in
- ** Research scholars, Centre for Health Psychology, University of Hyderabad, Central University, Prof C.R. Rao Road; Gachibowli; P.O., Hyderabad - 500046; Telangana; (India), Email ID:kavyahcu@gmail.com, teteyralte@yahoo.in
- *** Corresponding author-Assistant professor, Centre for Health Psychology, University of Hyderabad, Central University, Prof C.R. Rao Road; Gachibowli; P.O., Hyderabad - 500046; Telangana; (India), Email ID: meera.padhyuoh@gmail.com, Ph No: 040 23013228.

INTRODUCTION

Type 2 diabetes (T2D) is one of the leading non communicable illness in India. India had witnessed 61.3 million diabetic patients in 2011 with predictions of 101.2 million diabetics by year 2030 (International Diabetes Federation, 2013; Mohan, Madan, Jha, Deepa, & Pradeepa, 2004). Diabetes management is given utmost importance to prevent long term complications and to achieve improved health outcomes. The responsibility of the illness management majorly rests on the patients themselves. Hence, various psychological factors and their interplay has a significant influence on the management of the health condition. Two such factors are the patient's perceptions of illness and health hardiness.

Health related hardiness is the "personality characteristic that enables individuals to adapt to actual or potential health problems through control, commitment and challenge" (Pollock, 1989 b). *Control* refers to the use of resources needed to cope (appraise, interpret and respond to) with health stressors. *Commitment* is participation in health related activities apt for dealing with health stressors. *Challenge* is the reappraisal or reassessment of health stressors as potentially beneficial, and views change as an opportunity or chance for growth (Pollock, 1989). According to Gebhardt and colleagues (2001) health hardiness includes—health value (HV), internal health locus of control (IHLOC), perceived health competence (PHC), and external health locus of control (EHLOC). While locus of control (LOC) is associated with the source or origin of control i.e. internal or external, perceived health competence relates to a person's generalized expectancy about the ability to interact effectively with his/her environment to achieve the desired health outcomes (Wallston, 1992; Smith, Wallston, & Smith, 1995). Perceived health competence (PHC) is a combination of *behavioral expectancy* and an *outcome expectancy*. Behavioral expectancy is the belief that one is capable of carrying out a particular behavior and an *outcome expectancy* is the belief that the behavior will result in good health.

On the other hand health value is considered as the extent to which the individuals participate in behaviors that they believe will increase the chances of attaining their valued goals. For instance, if a behavior is planned to improve or protect a person's health, then he or she is more likely to participate in such behavior if health is a valued goal or a desired outcome. Individual differences exist in valuing the health independently over the other desired outcomes. Some people may see health only in terms of whether they can fulfill or complete their day-to-day tasks; others actively participate in health enhancing behaviors with the only purpose of being healthy. Various theories of health behavior have opined that the extent to which one values health is important than the reasons for valuing it. The relation between health locus of control (HLOC) and health behavior is not of much significance if health is valued less (Lau, Hartman & Ware, 1986; Wallston & Wallston, 1981, 1982).

Illness perceptions on the other hand are vital as perceptions influence various health outcomes. Self-regulation model developed by Leventhal is the most widely studied theoretical model of illness perceptions (Leventhal, Nerenz, & Steele, 1984). This model proposes that the situational stimuli (for example symptoms) give rise to cognitive and emotional representations of illness and both of these are processed in parallel. The five dimensions within cognitive representations are (1) *identity*- the condition and the symptoms related to the illness (2) *consequences* - the effects and outcome of the illness (3) *cause*- attribution for illness (4) *timeline*- pattern of change overtime whether illness is acute, chronic or fluctuating (5) *cure or control*- belief about illness recovery (Leventhal *et al.*, 1984; Lau & Hartman, 1983). The understanding about the various dimensions of cognitive representations is not necessarily validated scientifically or medically but developed from personal experience (such as physical symptoms and associated emotions), social influences and/or interaction with health-care providers. The cognitive representations directly affect a person's emotional response to their illness and their coping behavior such as adherence to treatment regimen. Various studies have established a relationship between negative illness perceptions (for example a large number of symptoms related to the illness, more severe consequences and longer timeline beliefs) and increased future disability and a slower recovery (Botha-Scheepers, Riyazi, Kroon *et al.*, 2006; Scharloo, Kaptein, Weinman, Bergman, Vermeer & Rooijmans, 2000).

Limited number of empirical studies have been conducted to examine the association between health related hardiness and illness perceptions. A study by Brooks (2008) involving individuals with inherited bleeding disorders and other chronic illnesses found a negative correlation between health related hardiness and perception of illness impact. The research findings of a study on cancer patients indicated that higher the severity of internal locus of control, lower the severity of anxiety and depression (Kulpa, Kosowicz, Stypula-Ciuba & Kazalska, 2014). It is clear that possessing the personality characteristic of hardiness, particularly health related hardiness would positively influence or promote higher levels of perceived health status and positive perceptions, consequently allowing the patient to have control over their condition, and refrain from negative emotions-like anger, depression, anxiety, fear and so on and overcome the resultant distress.

Rationale for the Present Study

Chronic illness such as type 2 diabetes is one of the most threatening health issue in India. Patient's responses to chronic illnesses is a major concern for the health psychologists. Since health hardiness had been found to explain variability in individual's responses to illness, identifying this characteristic in a patient with type 2 diabetes has strong implications for the field of health psychology. Understanding the positive impact of health hardiness and its promotion, health psychologists can help chronically ill patients suffering with T2D gain a sense of

hardiness and these strategies may promote a positive health perception along with other health outcomes.

There is an increasing body of literature demonstrating the association of health hardiness with different psychological domains in individual. The significance of the health hardiness among patients has been found for other important domains such as psychosocial adjustment, self-reported health and health behavior and so on. However, to the authors' knowledge, no previous studies have investigated the impact of health hardiness in the context of individuals with type 2 diabetes and their perception of illness. Considering the dearth of the research this study is designed to examine (1) the relationship between health hardiness and illness perceptions and (2) the impact of the health hardiness on illness perceptions in type 2 diabetes patients. The authors conceptualize that the patients with high health value, perceived health competence and internal health locus of control may possess positive illness perceptions.

METHOD

Design

A correlational design was used to study the impact of the health hardiness on illness perceptions in type 2 diabetes patients.

Sample

The sample consisted of 77 type 2 diabetes patients (36 men and 41 women). The age range of the sample was 30 to 69 years ($M = 52.90$; $SD = 10.01$). The duration of illness (type 2 diabetes) of the patients ranged from 3 months to 20 years ($M = 7.20$; $SD = 5.80$).

Tools

The Revised Illness Perception Questionnaire (IPQ-R): The original IPQ was developed by Weinman, Petrie, Moss-Morris and Horne (1996) and was subsequently revised by Moss-Morris, Weinman, and colleagues (2002) to assess the illness perception of patient. The study used diabetes specific IPQ-R. The questionnaire has three sections. First section consists of *identity subscale* which presents 14 symptoms. The patients are requested to point out which symptoms they have experienced since onset of diabetes and those that they believe are related to their diabetes using yes (1)/ no(0) response format. The summation of the 'yes rated' items on the second rating forms the illness identity subscale.

The second section comprises of the following dimensions: timeline (acute/chronic), consequences, treatment control, personal control, illness coherence, timeline cyclical, and emotional representations. The items on these dimensions are rated on a five-point Likert type scale ranging from *strongly disagree* to *strongly agree*. The third section consists of causal dimension containing 18 attributional items and have the same 5-point Likert type scale. The internal reliability of the

dimensions ranged from 0.79 for timeline cyclical to 0.89 for timeline (acute/chronic) in chronic illness patient groups (Moss-Morris *et al.*, 2002).

Revised Health Hardiness Inventory-24 (RHHI-24): It consists of 24 items under 4 scales namely health value, external health locus of control, internal health locus of control, and perceived health competence. The items on these scales are rated on a fivepoint Likert scale ranging from *strongly disagree* to *strongly agree*. Scores on the each scale are computed by totaling the item scores and dividing the total score by the number of items in the scale. As a result, the scores on all four scales range from 1 to 5. The reliability of the scales of RHHI-24 was found to be adequate with alpha values ranging from .66 to .79 in general population sample (Gebhardt, van der Doef, & Paul, 2001).

Procedure

Before commencement of the study approval from university ethics committee (where the authors work) and diabetes clinic authorities was obtained, then the participants were contacted. Prior to the administration of questionnaires, informed consent was obtained and participants were informed that the participation was voluntary and their responses would be anonymous. The average time of administration of the measures was 25 to 30 minutes per participant. The obtained quantitative data were analyzed using appropriate statistics.

RESULTS

The obtained quantitative data were analyzed using paired samples *t*-test, Pearson (*r*) product moment correlation and standard multiple regression using software SPSS.20.

Difference between symptoms experienced (since the diagnosis of diabetes) and symptoms associated with diabetes (identity subscale) were examined by computing paired samples *t* test, which showed significant differences concerning the symptoms patient's experienced as compared to those they associated with their type 2 diabetes, $t(75) = 2.91, p < .05$. The mean of the symptoms experienced ($M = 4.70$; $SD = 4.06$) was higher than the mean of symptoms associated with type 2 diabetes ($M = 4.31$; $SD = 3.99$).

Further, analysis of Gender difference in health hardiness and illness perceptions revealed that Male and female patients significantly differed only on treatment control dimension, $t(75) = 2.08, p < .05$, with female patients ($M = 19.46$, $SD = 2.97$) having greater mean as compared to their counterparts ($M = 18.00$, $SD = 3.17$). Both the groups did not show difference on any of the scales of health hardiness.

In order to study the relationship between health hardiness and illness perceptions, intercorrelations were computed between the dimensions of the two variables

Table 1: Intercorrelations between health hardiness and illness perceptions.

Variables	External Health Locus of Control	Perceived Health Competence	Internal Health Locus of Control	Health Value
1 Identity	.15	-.13	.03	.10
2 Timeline (acute/chronic)		.13	-.11	-.00
3 Consequences		.37**	-.24*	-.43**
4 Personal Control		-.22*	.13	.49**
5 Treatment Control		-.46**	.40**	.54**
6 Illness Coherence		-.48**	.46**	.44**
7 Timeline Cyclical		.41**	-.54**	-.36**
8 Emotional Representations		.36**	-.55**	-.29**

* $p < 0.05$, ** $p < 0.01$

Pearson r was computed to assess the relationship between health hardiness and illness perceptions. Results revealed both significant positive and negative correlations among the variables. The correlation values indicated low to moderate linear relationship between the variables. Identity and timeline (acute/chronic) dimensions did not reveal any significant relationship with health hardiness scales.

Impact of health hardiness on illness perceptions as studied by computing separate standard (simultaneous) multiple regressions with the dimensions of IPQ-R. The results are presented in Tables 2 to 7. The health hardiness scales were entered together into the regression equation using enter method. Together as a model, health hardiness scales predicted six dimensions of IPQ-R except identity and timeline dimensions.

Table 2. Summary of standard (simultaneous) multiple regression for health hardiness predicting consequences dimension of IPQ-R ($N = 77$)

Predictors	Consequences				
	B	SEB	β	t	P
External health locus of control	2.35	1.16	.27	2.02	<.05
R^2	.23				
C	19.76				
F	5.56	$p < .05$			

B = Unstandardized beta coefficient, SEB = Standardized error of beta, $\hat{\alpha}$ = Standardized beta coefficient, t - t values of Beta, C = Constant.

Together as a model, health hardiness scales predicted consequences and the multiple correlation between health hardiness scales and consequences is moderate, $R = .48$. The combination of health hardiness scales accounted for nearly 23 % of the variation in consequences, $R^2 = .23$. The regression equation is

significant as $F(4, 72) = 5.56, p < .05$. As seen from Table 2, only one predictor had significant standardized regression weight (external health locus of control, $\beta = .27, t = 2.02, p < .05$), which means it is a significant contributor to predicting consequences of type 2 diabetes.

Table 3.: Summary of standard (simultaneous) multiple regression for health hardiness predicting personal control ($N = 77$)

Predictors	Personal control				
	<i>B</i>	<i>SEB</i>	β	<i>t</i>	<i>P</i>
Internal health locus of control	3.02	1.17	.47	2.57	.01
R^2	.27				
<i>C</i>	14.71				
<i>F</i>	6.67	$p < .001$			

B = Unstandardized beta coefficient, *SEB* = Standardized error of beta, β = Standardized beta coefficient, *t* = *t* values of Beta, *C* = Constant.

Together as a model, health hardiness scales predicted personal control and the multiple correlation between health hardiness and personal control is medium, $R = .52$. The combination of health hardiness scales accounted for nearly 27 % of the variation in personal control, $R^2 = .27$. The regression equation is significant $F(4, 72) = 6.67, p < .001$. Only one predictor had significant standardized regression weight (Internal health locus of control, $\beta = .47, t = 2.57, p < .01$), indicating that IHLOC is a significant contributor to predicting personal control.

Table 4.: Summary of standard (simultaneous) multiple regression for health hardiness predicting treatment control ($N = 77$)

Predictors	Treatment control				
	<i>B</i>	<i>SEB</i>	β	<i>t</i>	<i>P</i>
Internal health locus of control	1.52	.74	.35	2.04	<.05
R^2	.60				
<i>C</i>	13.67				
<i>F</i>	10.41	$p < .001$			

B = Unstandardized beta coefficient, *SEB* = Standardized error of beta, β = Standardized beta coefficient, *t* = *t* values of Beta, *C* = Constant.

Similarly, the multiple correlation between health hardiness and treatment control is moderate, $R = .60$. The combination of health hardiness scales accounted for 60 % of the variation in treatment control, $R^2 = .60$. The regression equation is significant $F(4, 72) = 10.41, p < .001$. Only one predictor had significant standardized regression weight (internal health locus of control, $\beta = .35, t = 2.04, p < .05$), indicating that it is a significant contributor to predicting treatment control.

Table 5: Summary of standard (simultaneous) multiple regression for health hardiness predicting illness coherence ($N = 77$)

Predictors	Illness coherence				
	<i>B</i>	<i>SEB</i>	β	<i>t</i>	<i>P</i>
External health locus of control	-2.23	1.04	-.27	2.13	<.05
R^2	.32				
<i>C</i>	11.55				
<i>F</i>	8.66	$p < .001$			

B = Unstandardized beta coefficient, SEB = Standardized error of beta, β = Standardized beta coefficient, t - t values of Beta, C = Constant.

Together as a model, health hardiness predicted illness coherence and the multiple correlation between RHHI-24 scales and illness coherence is moderate, $R = .57$. The combination of health hardiness scales accounted for 32 % of the variation in illness coherence, $R^2 = .32$. The regression equation is significant $F(4, 72) = 8.66, p < .001$. External health locus of control emerged as individual contributor in predicting illness coherence with significant standardized regression weight ($\beta = -.27, t = 2.13, p < .05$).

Table 6: Summary of standard (simultaneous) multiple regression for health hardiness predicting timeline cyclical ($N = 77$)

Predictors	Timeline cyclical				
	<i>B</i>	<i>SEB</i>	β	<i>t</i>	<i>P</i>
Perceived health competence	-1.89	.60	-.39	3.11	<.05
Internal health locus of control	-1.59	.77	-.36	2.06	<.05
R^2	.34				
<i>C</i>	18.18				
<i>F</i>	9.35	$p < .001$			

B = Unstandardized beta coefficient, SEB = Standardized error of beta, β = Standardized beta coefficient, t - t values of Beta, C = Constant.

Together as a model, health hardiness predicted timeline cyclical and the multiple correlation between health hardiness scales and timeline cyclical is moderate, $R = .58$. The combination of health hardiness scales accounted for 34 % of the variation in illness coherence, $R^2 = .34$. The regression equation is significant $F(4, 72) = 8.66, p < .001$. Perceived health competence ($\beta = -.39, t = 3.11, p < .05$) and internal health locus of control ($\beta = -.36, t = 2.06, p < .05$), emerged as significant individual contributors.

Table 7: Summary of standard (simultaneous) multiple regression for health hardiness predicting emotional representations (N = 77)

Emotional representations					
Predictors	B	SEB	β	t	P
Perceived Health Competence	-5.73	1.44	-.51	3.95	<.001
R^2	.32				
C	36.79				
F	8.65	p<.001			

B=Unstandardized beta coefficient, SEB = Standardized error of beta, β = Standardized beta coefficient, t-t values of Beta, C = Constant.

Together as a model, health hardiness predicted emotional representations and the multiple correlation between health hardiness and emotional representations is moderate, $R=.57$. The combination of health hardiness scales accounted for 32 % of the variation in emotional representations, $R^2 = .32$. The regression equation is significant $F(4, 72) = 8.65, p<.001$. Perceived health competence have significant standardized regression weight (beta = -.51, $t = 3.95, p<.001$), meaning that it is a significant contributor in predicting emotional representation.

Casual attribution dimension is not included in the analyses as the sample size was small to compute factor analysis. Patients were asked to rank-order the three most significant factors that they believe resulted in their diabetes. Considering the primary cause, 32.5 percent of the patients reported heredity as the primary cause of their diabetes and 29.9 percent reported stress as the primary cause. 'Don't know' response was given by 15.5 percent. Other reported causes (as primary) include consumption of alcohol, consumption of excessive sweets, excessive food intake, being overweight, being unlucky, due to changes in body, frustration, god, and leg injury. One of the patient said that 'everybody is suffering so I also got'.

DISCUSSION

The findings of the present study revealed that the patients attributed relatively low number of symptoms to their diabetes as compared to the symptoms experienced since their diabetes (identity). Here, the purpose was to find out the difference between somatization (in patients) and identity. Gender difference was observed in treatment control dimension of illness perception. The results demonstrated that with the increase in external orientation with respect to health locus of control (EHLOC) the negative consequences of type 2 diabetes, its cyclical nature, and the negative emotional responses to type 2 diabetes tend to increase. With the decrease in external orientation with respect to health locus of control the beliefs about the controllability (personal and treatment) and sense of illness coherence was found to increase.

As expected, the findings were contrary in the case of internal health locus of control (IHLOC). The increase in internal orientation with respect to health locus of control was associated with the decrease in negative consequences of type 2 diabetes, its cyclical nature, and the negative emotional responses. And positive beliefs about the controllability (personal and treatment control) and sense of illness coherence end to increase with the increase in internal orientation with respect to health locus of control. These findings correspond with theoretical framework as well as with the results of other published studies. The research findings of a study on patients with cancer of the digestive system indicated that higher the severity of internal locus of control, lower the severity of anxiety and depression (emotional representations)(Kulpa, Kosowicz, Stypula-Ciuba & Kazalska, 2014).

The possible explanation for the positive relationship between IHLOC and personal control (dimension of illness perception) can be that the IHLOC is exhibited by allocating a greater responsibility for one's health as the effect of one's behavior. Those patients demonstrating dominance of IHLOC are more confident in the doctor patient relationship, are independent in making decisions about their health, and have a higher sense of responsibility for their health. This encourages adherence to treatment recommendations and mobilizes patients to take effective health promoting measures and to continue in them (Rotter, 1954). The explanation for the negative relationship between EHLOC and personal control can be explained by the fact that the EHLOC is favorable to placing the responsibility for one's health on others, which causes decrease in self-motivation to take preventive and health-promoting behaviors.

Perceived health competence showed similar trend as IHLOC except that it did not show a correlation with personal control as in the case of IHLOC. With increase in health value, positive beliefs regarding the controllability (personal and treatment control) of the illness and sense of illness coherence tend to increase. In other words, increase in determination towards and willingness to make everyday sacrifices for improved health and viewing health as a crucial aspect is associated with increase in positive beliefs about personal and treatment control. And with the decrease in health value, negative consequences of type 2 diabetes tend to increase or vice versa.

The findings demonstrated that health hardiness predicted all dimensions of illness perception except identity and timeline. EHLOC is the individual contributor in predicting consequences and illness coherence, whereas IHLOC is the individual contributor in predicting beliefs about personal and treatment control and cyclical nature of type 2 diabetes. Finally perceived health competence is the individual contributor in predicting cyclical nature of illness and emotional representations. The results also showed that the hereditary link and stress were reported as primary causes of the type 2 diabetes followed by various other causes. The research findings are in line with the literature. An earlier study had revealed that first degree

relatives of those with type 2 diabetes have three times more chances of developing the illness than those without any positive family history of the illness (Florez, Hirschhorn & Altshuler, 2003). A 12-year longitudinal study's findings involving women subjects found that moderate to high stress levels were related to a 2.3-fold increase in the chances of diabetes 3-years later for the total estimated effect (Harris, Oldmeadow, Hure, Luu, Loxton, Attia, 2017). However, the sources of stress were not enquired of the participants. This would give an insight into how the patients believe that various stressors (work related stress, stress due to life events, or having a stress prone personality etc.) lead to their present illness. Also assessing the gender difference in the type of stressors would be of significance. There is need to dispel the myths associated with the causes (such as being unlucky) of diabetes as reported by the patients by educating them. The present findings may add to the field of health psychology and will be useful in designing health hardiness based interventions to enhance positive illness perceptions in patients with type 2 diabetes.

Limitations

First, and most importantly, the results were cross-sectional and thus do not imply a casual direction. Secondly the sample size was small and qualitative approach was not included. Other considerable limitations in the study include sample size and a non-random sample, limiting the generalizability of the findings. Both the research tools used in the study are self-report measures, and the disadvantages for these include social desirability. For instance, valuing health can be a socially desirable attitude to hold.

Acknowledgements

We are thankful to the authorities of diabetes clinic for allowing us to interact with the patients and providing us all the support. We acknowledge the support received from the clinic staff. We are highly indebted to all the diabetes patients for agreeing to be a part of this study.

REFERENCES

- Botha-Scheepers, S., Riyazi, N.,... Kroon, H.M.(2006). Activity limitations in the lower extremities in patients with osteoarthritis: the modifying effects of illness perceptions and mental health. *Osteoarthritis Cartilage* (in press).
- Brooks, M. V. (2008). Health-related hardiness in individuals with chronic illnesses. *Clinical Nursing Research*, 17(2), 98-117.
- Florez, J. C., Hirschhorn, J., & Altshuler, D. (2003). The inherited basis of diabetes mellitus: implications for the genetic analysis of complex traits. *Annual review of genomics and human genetics*, 4(1), 257-291.
- Gebhardt, W. A., van der Doef, M. P., & Paul, L.B. (2001). The revised health hardiness inventory (RHHI-24): Psychometric properties and relationship with self-reported health and health behavior in two Dutch samples. *Health Education Research*, 16(5), 579-592. DOI:<https://doi.org/10.1093/her/16.5.579>

- Harris, M. L., Oldmeadow, C., Hure, A., Luu, J., Loxton, D., & Attia, J. (2017). Stress increases the risk of type 2 diabetes onset in women: A 12-year longitudinal study using causal modelling. *PloS one*, 12(2), e0172126.
- International Diabetes Federation. IDF diabetes atlas.(2013). *International Diabetes Federation. A book*. (6th ed). Brussels : Belgium.
- Kulpa, M., Kosowicz, M., Stypuśa-Ciuba, B. J., & Kazalska, D. (2014). Anxiety and depression, cognitive coping strategies, and health locus of control in patients with digestive system cancer. *Gastroenterology Review/Przegląd Gastroenterologiczny*, 9(6), 329-335.
- Lau, R.R., & Hartman, K.A. (1983). Common sense representations of common illnesses. *Health Psychology*, 2, 167 – 85.
- Leventhal, H., Nerenz, D. R., & Steele, D. J. (1984). Illness representations and coping with health threats. In Baum, A., Taylor, S.E., & Singer, J.E., (Eds.). *Handbook of Psychology and Health*, Volume IV: social psychological aspects of health. Hillsdale, NJ: Erlbaum.
- Mohan, V., Madan, Z., Jha, R., Deepa, R., & Pradeepa, R.(2004). Diabetes social and economic perspectives in the new Millennium. *International Journal of Diabetes in Developing Countries*, 24, 29-35.
- Moss-Morris, R., Weinman, J., Petrie, K. J., Horne, R., Cameron, L. D., & Buick, D. (2002). The revised illness perception questionnaire (IRQ-R). *Psychology and Health*, 17, 1–16.
- Petrie, K.J., Cameron, L.D., Ellis, C.J., Buick, D., & Weinman, J.(2002). Changing illness perceptions after myocardial infarction: an early intervention randomized controlled trial. *Psychosomatic Medicine*, 64, 580–586.
- Pollock, S. E. (1989). The hardiness characteristic: a motivating factor in adaptation. *Advances in nursing sciences*, 11(2), 53-62.
- Pollock, S.E. (1989b). Adaptive responses to diabetes mellitus. *Western Journal of Nursing Research*, 11, 265-280.
- Rotter, J. B. (1954). Social learning and clinical psychology.
- Scharloo, M., Kaptein, A.A.,... Weinman, J.A. (1999). Predicting functional status in patients with rheumatoid arthritis. *Journal of Rheumatology*, 26, 1686–1693.
- Scharloo, M., Kaptein, A.A.,... Weinman, J. (2000). Patients' illness perceptions and coping as predictors of functional status in psoriasis: a 1-year follow-up. *British Journal of Dermatology*, 142, 899–907.
- Smith, M. S., Wallston, K. A., & Smith, C. A. (1995). The development and validation of the perceived health competence scale. *Health Education Research*, 10, 51-64.
- Wallston, K.A., & Wallston, B.S. (1981) Health locus of control scales. In Lefcourt, H. M. (Ed.), *Research & with the Locus of Control Construct*. Academic Press, New York.
- Wallston, K.A., & Wallston, B.S. (1982) Who is responsible for your health? The construct of health locus of control. In Sanders, G.S. & Suls, J. (Eds.), *Social Psychology of Health and Illness*. Erlbaum, Hillsdale, NJ.
- Wallston, K. A. (1992). Hocus-pocus, the focus isn't strictly on locus: Rotter's social learning theory modified for health. *Cognitive Therapy and Research*, 16, 183-199.
- Weinman, J., Petrie, K. J., Moss-Morris, R., & Horne, R. (1996). The illness perception questionnaire: a new method for assessing the cognitive representation of illness. *Psychology and health*, 11(3), 431-445.

THE ROLE OF YOGA ON WELL-BEING OF INDIAN ELDERLY

Shyodan Singh, D. Chao** and Satish Kumar Rajoria****

ABSTRACT

Present study was designed to assess the impact of yoga and exercise among the Indian elderly in metropolitan cities. For this purpose, a sample of 200 elderly persons were identified and measured their physical ailments, stress, subjective well-being, and blood pressure. They were conditioned to perform certain exercise and yoga for the period of three month. Then their physical ailments, stress, subjective well-being, and blood pressure are reassessed so as to determine the effect of yoga and physical exercise. The finding indicated significant difference between the pre-and post-conditions on the elderly physical ailments, stress, subjective well-being, and blood pressure which are for both for elderly male and elderly female. It was found that physical ailment decreased subjective well-being increased, high blood pressure decreased and stress also decreased. Elderly persons despite their varied difficulties and problems, found to have advantages when performing the various daily activities. Apart from everyday activities, certain activities are found to have great impact on their life. Some of the activities such as exercise and yoga are found to have played a very significant role in their twilight years.

Key Words: Yoga, Wellbeing, Eldery

INTRODUCTION

Old age in the Indian society is emerging ever complicated as it involves physical, cultural, social and psychological characteristics. The socio-cultural and

-
- * Shyodan Singh, Assistant Professor, Department of Psychology, Zakir Husain Delhi College University of Delhi, New Delhi.
- ** D. Chao, Assistant Professor, Department of Psychology, Zakir Husain Delhi College University of Delhi, New Delhi.
- *** Satish Kumar Rajoria, Assistant Professor, Department of Physics, Zakir Husain Delhi College University of Delhi, New Delhi.

demographic changes are complicating the challenges of health and well-being of the elderly. Thus, while better health facilities are expanding the life span the socio-economic conditions like poverty, and breaking up joint family system are posing serious threats and an increasing number of old age person are subjected to suffering in Indian Society.

The image of elderly has always been overshadowed by some negative attitudinal and behavioral characteristics which arouse a fear of growing old. The demographic analyses reveal that the aged constitute a significant segment of the population pyramid (Bose, 1988). The research efforts on the aged in India are comparatively limited (Ramamurti & Jamuna, 2010) a decade ago, but now is plentifully available. However, the interventions and other programs implemented for the welfare and development are comparatively few.

It is also observed that only scanty information related to interventions is available about the situation of the elderly across different strata of the society. Very few studies have been done on the needs of the elderly in different groups i.e., rural and urban, widowed and widowers, and even about the relatively better off sections of the society (Desai, 1988). Efforts are required to invest more as the existing findings are not focusing much on the interventions rather than assessing or determining the problems. Thus, there is an urgency to evaluate the needs of the aged for comprehensive investigation of the Indian elderly so that we may formulate ways to empower the aged so that they may enjoy life and contribute to societal development of India.

To identify various intervention programs that can help the elderly to lead and progress a better life is the need of the hour in the Indian social context. With this understanding, attempts have been made as to how yoga and physical exercise as an intervention impacted the life of the elderly in the Indian social context. Departing from the traditional idea of people are developing an orientation in which late adulthood and old age do not necessarily require disengaging. Rather elderly needs active engagement not only social network but also their physical and mental active connections. Therefore, we need to re-examine what it means to be an aged person from the physical activeness. It may be noted that individual and group level variations do exist in active ageing because people vary in terms of social, psychological and physical activities and social support offered to them in India. Keeping in view the changing scenario and the need to promote quality of life of the aged, it is important to understand the various modes in which people define and endeavor to become competent. It is expected that the exploration of empowering elderly and examining its psycho-social correlates would be helpful in planning suitable interventions and developing effective social policy. The present research attempts to develop a module for elderly empowerment of elderly in terms of enhancing, health, social support, leisure activity, security and reducing

the loneliness. Through this study, attempt was made as to how various means and ways to empower them from their daily disabilities and problems.

Inadequate financial resources are major problems of Indian elders, with higher degree of economic insecurity among the older women (Rajan, Mishra, & Sarma, 1999). This may add to their disadvantage of getting facilities for opportunities for physical exercise and other related daily activities. People living in the metropolitan cities may not have adequate space for recreational and other outdoor activities. This might have blinded the elderly from such activities.

In the rural areas, though there are space, families generally suffer from economic crises, as their occupations do not produce income throughout the year. The tendency is to spend more on their growing children, while diminishing expenditure on aged parents; thus, financial security of the elderly in rural areas families is very limited (Bali, 1995). This nature of rurality in India again indirectly discouraging the elderly to pursue physical exercise and other related activities including yoga and other meditation activities.

With these intentions, the purpose of this research is to study how the yoga and exercise as interventions impacted the daily life of elderly, and to provide a rationale for investigation of yoga as a protocol for promoting well-being of elderly. And also provide a comprehensive review of the body of yoga research, which highlights the strengths and weaknesses of a yoga intervention for health and wellness purposes. Finally, to present the results of empirical investigation concerning the impact of yoga and exercise on well-being of elderly and proposes cognitive-behavioral theory as a framework within which to understand the mechanisms of yoga.

Objectives

- I. To investigate the well-being, stress, physical ailments and blood pressure of elderly.
- II. To study the effect of yoga and exercise on well-being, stress, physical ailment and blood pressure of total elderly
- III. To study the effect of yoga and exercise on well-being, stress, physical ailment and blood pressure for male elderly
- IV. To study the effect of yoga and exercise on well-being, stress, physical ailment and blood pressure for female elderly

METHOD

Sample

A total sample of 200 elderly persons from various colonies of the national capital territory of Delhi was taken for the study. The sample consists of 108 males and 98 females from different age groups of 60 years and above. The sample are drawn on the basis of non-probability sampling procedure.

Design and Plan of Study

The study was carried out in two phases. Following are the phases:

Phase I: The first phase focused on quantitative data collection and to identify the well-being, stress level, physical ailment, and blood-pressure of elderly.

Phase II: Yoga and physical exercise as an intervention was introduced to the elderly. Each yoga session began with 5 minutes of meditation, continued with 30 minutes of asana, and concluded with 10 minutes of pranayama and meditation. The 30 minutes of asana include specific instructions for breathing and concentration technique. Each exercise session consisted of 5 minutes of stretching, 30 minutes of strength and balance work, and 10 minutes of stretching. The physical exercises paralleled the physical movements of the yoga sessions.

Measures

The following list of the tools was used.

1. **Information Schedule:** The information schedule was prepared by the investigators to collect information about the respondents' such as age, education, marital status, living arrangements, number of children's, occupation and pension.
2. **Subjective well-being (SWI):** Sell and Nagpal developed this inventory (SWI) in 1985. This inventory consists of 40 items. Each item has either three or four response categories. 19 of the items elicit positive affect, i.e., whether one feels good or satisfied about particular life concerns. 21 items elicit negative affect, i.e., unhappiness or worry or regret about the particular life concerns. All the items have the following response categories only: "Very positive", "Positive" and "Neutral" (or negative) affirmation for the positive items, and "Very negative", "Negative" and "Neutral" (or positive) statement for the negative items. This inventory has 11 factorial dimensions. This scale has high inter-rater reliability, inter-scores reliability, and test-retest reliability. The scale had been found to be highly significant and satisfactory in validity.
3. **Old Age Common Ailments Checklist:** This checklist was especially prepared with the help of 6 physicians from GTB, AIIMS and RML Hospitals, who were asked to list out the common ailments usually observed in the aged in their Med. OPD. From the information obtained a frequency analysis of the ailments was done to prepare the final checklist, which was administered on the sample of 200 elderly.
4. **Life Event Schedule:** Holmes & Rahe (1967) developed this scale by incorporating life events they found affecting individuals, on the basis of their clinical experience involving around 5000 patients. It originally consisted of 43 items, some indicating life style of individuals and

others indicating the occurrences involving individuals. The items also refer to ordinary and extraordinary personal, social and interpersonal transactions of life. Hann et. al. (1983) classified the items of the life events scale of Holmes and Rahe (1967) into five different groups - health, work and financial, home and family, Personal and social. The validity of the scale was consistently high ($r = .752$ to $.892$) and the reliability ranged from $r = .19$ to $.88$. Higher the score on life events the schedule more the stress experienced by the individual

5. **Blood Pressure and Heart Rate by Blood Pressure Monitor:** Blood pressure of the elderly was determined with the electronics device measuring the level of blood pressure.

RESULTS

The results of the study were analysed through statistical techniques as given under:

Table 1: Comparison between Pre-and Post-Conditions of the Elderly on their Physical Ailments, SWB, BP and Stress

Variables	Pre- Condition (200)		Post Condition (200)		t-value	Sign at
	Mean	SD	Mean	SD		
Physical Status (Ailments)	7.31	2.20	4.88	1.74	6.747	.000
Subjective Well-Being	93.84	9.64	102.81	7.78	5.66	.000
Blood Pressure	140.51	16.19	123.88	5.89	7.53	.000
Stress	104.06	22.98	66.43	23.32	8.97	.000

Table 1 shows the comparative results between the elderly conditions on physical ailments, subjective well-being, level of blood pressure and stress before and after practice of physical exercise and yoga. The comparison through t-test showed that there is significant difference between before and after practice session of physical exercise and yoga among the elderly on physical ailments, subjective well-being, stress, and blood pressure. The results indicated that elderly physical ailments, blood pressure, and stress level were significantly reduced after practicing of physical exercise and yoga. At the same time the subjective well-being is found to be significantly enhanced after practicing of yoga and physical exercises over a period of time. In all these variables, the results showed significant difference between before and after practicing of physical exercise and yoga. Therefore, it can be interpreted that there are positive impacts of physical exercise and yoga among the elderly on their physical ailments, subjective well-being, stress and blood pressure.

Table 2 shows the comparative results between male and female elderly on physical ailments, subjective well-being, level of blood pressure and stress. The

comparison through t-test showed that there is significant difference between male and female elderly on their physical ailments, subjective well-being, stress, and blood pressure. The results indicated no significant differences between the gender on elderly physical ailments, blood pressure, stress and subjective well-being. Therefore, it can be interpreted that gender does not have much influence on elderly physical ailments, subjective well-being, stress and blood pressure.

Table 2: Comparison between Male and Female on their Physical Ailments, SWB, BP and Stress

Variables	Male (108)		Female (92)		t-value	Sign at
	Mean	SD	Mean	SD		
Physical Status (Ailments)	5.91	2.16	6.26	2.46	.84	.406
Subjective Well-Being	98.05	9.28	98.57	10.35	.29	.769
Blood Pressure	130.31	12.21	133.90	16.60	1.35	.179
Stress	84.06	30.15	86.31	29.70	.41	.680

Table 3: Comparison between Pre-and Post-Conditions of Male Elderly on their Physical Ailments, SWB, BP and Stress

Variables	Pre (108)		Post (108)		t-value	Sign at
	Mean	SD	Mean	SD		
Physical Status (Ailments)	6.93	1.99	4.91	1.768	5.18	.000
Subjective Well-Being	93.68	9.65	102.62	7.39	5.22	.000
Blood Pressure	136.86	13.38	123.88	5.90	7.26	.000
Stress	102.51	22.82	66.28	23.84	7.17	.000

Table 3 shows the comparative results between the male elderly conditions on physical ailments, subjective well-being, level of blood pressure and stress before and after practice of physical exercise and yoga. The comparison through t-test showed that there are significant differences between before and after practice session of yoga and physical exercise among the elderly on physical ailments, subjective well-being, stress, and blood pressure. The results also indicated that elderly physical ailments, blood pressure, and stress level were significantly reduced after practicing of yoga and physical exercise. Similarly subjective well-being is found to be significantly increased. In all these variables, the results showed significant difference between before and after practicing of yoga and physical exercise. Therefore, it can be interpreted that there are positive impacts of yoga and physical exercise among the male elderly on their physical ailments, subjective well-being, stress and blood pressure.

Table 4: Comparison between Pre-and Post-Conditions of the Female Elderly on their Physical Ailments, SWB, BP and Stress

Variables	Pre (92)		Post (92)		t-value	Sign at
	Mean	SD	Mean	SD		
Physical Status (Ailments)	7.31	2.336	5.10	1.80	5.04	.000
Subjective Well-Being	94.33	9.41	102.61	8.42	4.42	.000
Blood Pressure	142.76	16.44	123.26	5.89	7.74	.000
Stress	105.00	22.27	69.57	24.18	7.22	.000

Table 4 shows the comparative results between the female elderly conditions on physical ailments, subjective well-being, level of blood pressure and stress before and after practice of yoga and physical exercise. The comparison through t-test showed that there is significant difference between before and after practice session of yoga and physical exercise among the elderly physical ailments, subjective well-being, stress, and blood pressure. The results indicated that elderly physical ailments, blood pressure, and stress level were significantly reduced after practicing of yoga and physical exercise. At the same time their subjective well-being is found to be significantly increased. In all these variables, the results showed significant difference between before and after practicing of yoga and physical exercise. Therefore, it can be interpreted that there are positive impacts of yoga and physical exercise among the female elderly on their physical ailments, subjective well-being, stress and blood pressure.

Table: 5: Correlation between Physical Ailments, SWB, BP and Stress of the elderly

	Physical Ailments	Subjective Well-Being	Blood Pressure
Physical Status (Ailments)			
Subjective Well-Being	-.256		
Blood Pressure	.173	-.212	
Stress	.401	-.408	.290

From the table 5, we can see the relationships between Elderly Physical Ailments, SWB, BP and Stress. Physical well-being is negatively related to Subjective well-being and positively related to blood pressure and stress of the elderly. Subjective well-being is found to have negative correlation with the blood pressure and stress of the elderly. And lastly, blood pressure is positively related to stress of the elderly.

DISCUSSION

As the attempt was made through this study to determine the impact of yoga and physical exercise on the life of the elderly living in the metropolitan city of

Delhi on their physical ailments, subjective well-being, blood pressure and stress level, the results indicated positive impact upon the elderly people. Considering the high level of stress due to high level of competitions (with the principle of survival of the fittest), in the metropolitan city, there are always possibilities for high level of blood pressure which can possibly lead to reducing of subjective well-being. The connection between the psychological aspects to the physical fitness is psychologically researched and proved time and again. Of any age categories, elderly persons are likely to be more closely connected than others.

Results of the study indicated that practice of yoga and physical exercises reduces physical ailments, stress level and blood pressure of the elderly persons and also increases their subjective well-being. Since the problems of the elderly are compounded by life crises like widowhood, marital problems, sexual problems, retirement, sensory loss, susceptible to disease, pains, hardness of joints, loosening of muscles, physical inactivity, immobility, etc. (Chao, 2015), physical ailments are likely to compound especially in the metropolitan set-up where there are several restrictions and inconveniences such as congested residential environment, pollution, and competitive stresses. In such as context, connecting the elderly to their selves through certain physical activities and relaxation techniques can possibly work wonder for further well-being. Vogler and others (2011) found that Participation of elderly in yoga programs is beneficial for health and well-being, and these programmes may improve quality of life of elderly.

India being a developing country with huge population with multiple problems, there is a dearth of opportunities for the senior citizens to stay fit although it has positive effect. Public awareness programs and other sensitization campaign would be required to make things happened.

Considering the gender difference on subjective well-being, physical ailments, blood pressure, and stress level, the results indicated no significant difference. This is something required to relook at what makes male and female to be similar in these variables. Finding all this background information may help to innovatively design research on the same.

With regard to specific gender analysis, male elderly persons are found to have significant changes on their physical ailments, blood pressure and daily stress level after practicing yoga and physical exercise. Similarly, female elderly also found to have significant improvement after practice of yoga and physical exercise in their physical ailments, stress, blood pressure and their subjective well-being. From the results, it can be concluded that the irrespective of the gender, there are positive impacts on practice of yoga and physical exercise among the elderly.

CONCLUSION

Practicing of physical exercise and yoga is found to have impact as the elderly physical and psychological health change. The present study would likely

lead to furthering of research as to how to identify the standardized physical activities such as exercise and yoga best suited for the elderly persons considering their physical vulnerability. The type of physical exercise and type of yoga may be standardized according to the needs and required of the elderly persons. Accordingly, such standardized techniques can be tested with different specialized professionals such as physiotherapists, orthopedic surgeons, geriatricians, impacted the elderly of their functional status and well-being as such. should be implemented as a welfare scheme.

REFERENCES

- Bose, A. B., & Gangrade, K. D. (1988). *The ageing in India: Problems and potentials*. New Delhi: Abhinav Publications.
- Chao, D. (2015). Elderly in the 21st Century: Issues and Challenges. Paper presented at the National Seminar on "Challenges to 21st Century India" organized by UGC-Human Resource Development Centers, Hermitage, Kumaun University, Nainital on the 15-16th of May 2015.
- Desai, K.G. (1988). The aged and the society. In A. B. Bose and K. D. Gangrade (Eds.), *The aged in India: Problems and potentialities*. New Delhi: Abhinav Publication.
- Easwaramoorthy, M., & Chadha, N. K. (1997). Quality of life of the elderly in Tamil Nadu. In N. K. Chadha (Ed.), *Ageing and the aged: Challenges before Indian gerontology*, New Delhi: friends Publications.
- Holmes, T. & Rahe, R. (1967) The social readjustment scale. *Journal of Psychosomatic Research*, 11, 213-218
- Vogler Juliane, O'Hara Lily, Gregg Jane & Burnell, Fiona, (2011). The Impact of a Short-Term Iyengar Yoga Program on the Health and Well-Being of Physically Inactive Older Adults. *International Journal of Yoga Therapy*, 21, 61-72

INTELLIGENCE AND PERSONALITY AS PREDICTORS OF WELL-BEING

Ranjana* and Nandini Moudgil**

ABSTRACT

The perception of psychological well-being can be considered as the cognitive component of life satisfaction as it involves assessments of how people are leading their lives (Diener & Suh, 2001). Personality is a set of psychological qualities or dispositions that may affect individual behavior (Zimbardo, Weber, & Johnson, 2000). Those people who report greater well-being believe that they have superior reasoning and specific personality traits have been shown to be predictors of a range of psychological problems. The current study was planned to analyze the relationship between well being, intelligence and personality. The sample consists of 104 undergraduates. Raven Standard Progressive Matrices, Well being inventory (Sell & Nagpal 1992) and NEO- Personality Inventory (Costa, McCrae 1991) were used to measure the Big Five personality traits and intelligence to examine their relationships to psychological well-being. In addition, the predictive capacity of intelligence and personality traits were analyzed. The data were analyzed by using Pearson's Product Moment correlation and stepwise regression analysis. Results showed that (i) neuroticism, a factor of personality, and intelligence were strongly related to psychological well-being and (ii) Stepwise regression analysis revealed that intelligence and the Big Five personality factor of neuroticism were strong predictors of well-being. These results confirm the prognostic significance for intelligence and neuroticism on psychological well-being.

Key Words: Intelligence, personality traits, psychological well-being.

* Ranjana, PhD, Assistant Professor, Department of Psychology, Kurukshetra University, Kurukshetra

** Nandini Moudgil, Research Scholar, Department of Psychology, Kurukshetra University, Kurukshetra

INTRODUCTION

Well-being refers to how people experience the quality of their lives and includes both emotional reactions and cognitive judgments. Well-being is a somewhat malleable concept which is to do with people's feeling about everyday life activities. Such feelings may range from negative mental states or psychological strains such as anxiety, depression, frustration, emotional exhaustion, unhappiness, dissatisfaction, to a state which has been identified as positive mental health (Jahoda, 1958; Warr 1978). Since the inception of behavioural sciences, several attempts have been made by researchers from diverse fields to understand facets and correlates of psychological wellbeing (Balogun, Bada & Adejuwon, 2013). Satisfaction and psychological well-being can be characterized as indicators of good mental functioning (Argyle, 1987). Individuals are in a state of psychological well-being if they have a high degree of satisfaction with themselves. The perception of psychological well-being can also be considered as the cognitive component of life satisfaction as it involves assessments of how people are leading their lives (Suh & Diener 2001). Psychological wellbeing is crucial in the understanding and explaining of human behaviour (Ryff, 1989). Ryff (1989) defines psychological wellbeing as a dynamic concept that includes subjective, social and psychological dimensions as well as health related behaviours. Psychological wellbeing may also be referred to as development and functioning of the mental abilities such as perception, memory and awareness of things happening within the adolescent's environment (Myers, 2002). It has been believed for many decades that the state of one's psychological wellbeing can be measured or ascertained when there seems to be an absence of mental or emotional disturbances (Ryff, 1989). Psychological wellbeing is usually conceptualized as some combinations of positive affective states such as happiness (the hedonic perspective) and functioning with optimal effectiveness in individual and social life (the eudaimonic perspective (Winefield, Gill, Taylor & Pilkington, 2012). Psychological well being is a state of affairs and combination of being happy while psychological, sociological situations seem under control with feelings of reported happiness, capability, satisfied with life, feelings of one's been supported and cared about (Haghshenas & Huppert. 2009). Psychological wellbeing is a learned process, where certain psychological responses such as self-efficacy, financial success, attractiveness etc, when reinforced through external approvals in the form of praise or award, result in responses that demonstrate wellness.

The modern concept of personality is the extension of same concept, which takes into accounts all physical, psychological- and social characteristics of the individual while describing personality. Psychologists view personality as a dynamic organization, constituted from physiological systems of an individual, which determines one's behaviour, interest, viewpoint and capabilities and allows for anticipating what one might do in a certain circumstance (Emmons, 1986). A large body of research conducted to investigate the role of personality traits in

psychological wellbeing have indicated that personality traits play a vital role in starting, developing and continuation of wellbeing (Ball, 2005). The structure of personality has been explained based on several models. One model which has received considerable attention is five-factorial model of personality including extraversion, agreeableness, neuroticism, conscientiousness, and openness (Haghshenas, 2009). The big five personality traits are five broad domains or dimensions of personality that are used to describe human personality. Extraversion is viewed in terms of an array of activities and not the intensity of the activities as energy or necessary motivation is sought from outside or external cues (Paunonen, et al., 2001). Extroverts tend to be actively participative in group discussions, enthusiastic, garrulous and tend to be forceful when assertive (Spain, Eaton & Funder, 2000). Extroversion focuses mainly on quantity and intensity of relationship (Lopes, Salovey & Straus, 2003). Agreeableness is a trait often characterized as being kind, considerate, generous, trusting and optimistic in nature. Agreeable individuals are often referred to as selfless and would generally please someone else other than themselves, and project positive harmony in social gatherings (Paunonen, et al., 2001). Individuals high in neuroticism experience more negative life event than others (Magnus, Diener, Fujita, & Pavot, 1993). Related behaviors are being anxious, depressed, emotional, suspicious and insecure. Openness is generically referred to individuals who are curious and overtly expressive across situations in terms of appreciating art and creativity, exploring various avenues of thoughts and emotion (Spain, Eaton & Funder, 2000). Openness to experience describes imaginative and carouse tendencies. Highly open people are original, cultured, broadminded and intelligent (McCrae & Costa, 1986). Introverts are generally deemed to be less active in social engagement and dissipation of energy than extroverts. They tend to be reclusive yet deliberate, calm but not shy or depressed but instead show some level of independence in achieving task. However, this does not suggest that they are unfriendly or loners (Paunonen, et al., 2001). Personality is an important determinant factor for well being (Gilovich & Eibach, 2001).

The Five Factor Model (Costa & McCrae, 1989) has been widely used in investigating the role of personality on psychological wellbeing. A number of studies have pointed to the importance of personality traits in understanding psychological wellbeing (Clarke, Victor, Carol Ryff, & Wheaton, 2001). In Cheng and Chan's, (2005) study, extraversion and neuroticism were found to be the strongest predictors of psychological wellbeing. Other studies have also linked extraversion, neuroticism, conscientiousness and agreeableness with psychological wellbeing (Lopes, Salovey & Straus, 2003; Pudrovskaya, Hauser, & Springer, 2005). Review of literature reflects that numerous studies have been conducted showing an association between well being and the two personality traits namely extraversion and neuroticism (Diener, 2000; Diener & Lucas, 1999; Libran, 2006; Vittersa, 2001; Wismijer & van Assen, 2008).

Intelligence includes concern for the broader social context in which intelligent behavior occurs. It may be defined as the subjective feeling of contentment, happiness and satisfaction with a sense of achievement, utility and no distress. Some define personality as the pattern of behavior in a certain way, for others personality constitutes the intelligence of the mind. The author of the Wechsler Adult Intelligence Scale (WAIS) argued that "general intelligence cannot be equated with intellectual abilities however broadly defined, but general intelligence must be regarded as a manifestation of the personality as a whole" (Zachary, 1990). With this, he makes a distinction between intellectual abilities (the behaviour measured by intelligence tests) and general intelligence. General intelligence is defined in terms of concrete actions or behaviour and it is different from intellectual abilities in that the first is a broader and a more prevailing capacity. According to Wechsler (1958) "Intelligence is the aggregate or the global capacity of an individual to act purposefully, to think rationally and to deal effectively with the environment". Wechsler believes that intelligence enables an individual to act purposefully adapting to the environment. Psychological tests have been used to measure a wide range of human characteristics-everything from highly specific work related skills to more global measures of personality. Perhaps the single characteristic that has received the most attention is intelligence that is generally defined as the ability to think abstractly and to learn readily from experience (Flynn, 1987).

Objectives

1. To study the relationship of five personality factors with well being, among undergraduates.
2. To study the relationship between intelligence and well being among undergraduates.
3. To explore whether personality factors and intelligence significantly predict well being among undergraduates.

Hypotheses

1. Personality factors will significantly correlate with psychological wellbeing of undergraduates.
2. Intelligence will significantly correlate with psychological wellbeing of undergraduates.
3. Some personality factors and intelligence will predict psychological wellbeing of undergraduates.

METHOD

Sample

The present study was conducted on a sample of 104 university undergraduates of Haryana. The age range of the sample was from 17 to 21 years. The sample was selected from students of under graduate courses who

volunteered to participate in the study. The independent variables are personality factors and intelligence, while the dependent variable is psychological wellbeing.

Tools

Five Factor Inventory (Costa, McCrae 1992): NEO-Five Factor Inventory (NEO-FFI) is a 60 item version of the NEO-PI-R that is scored for the five domains only. The full NEO-PI-R form-S provides comprehensive study of Big Five factors - Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness. It comprises of 12 items for each dimension, making a total of 60 items. Each item is responded by the subject on a five point scale represented by labels of strongly disagree, disagree, neutral, agree, strongly agree. There are some negative items, scoring of which is to be done in reversed manner. The reliabilities of the five scales were assessed in terms of internal consistencies and test-retest. The alpha coefficients for the individual facet scale ranged from (.56) to (.81). The full scale coefficient alphas ranged from (.86) to (.95) (Costa et al., 1991). The test retest reliability (with three months interval) of NEO FFI scale were obtained from a college sample, found to be (.79), (.79), (.80), (.75) and (.83) for N,E,O,A and C scales respectively.

Subjective Well-Being Inventory (Sell & Nagpal 1992): Subjective Well-Being Inventory measures feelings of wellbeing experienced by an individual in day-to-day life concerns. It consists of 40 items, measuring 11 factorial dimensions: general wellbeing positive and negative effect, expectation-achievement congruence, confidence in coping, transcendence, family group support, social support, primary group unconcern, inadequate mental mastery, perceived ill-health, deficiency in social contact. Higher scores indicate more subjective well-being. The total sum of the 40 items gives the overall subjective well-being score. The inventory is scored by attributing the values 3, 2 and 1 to response categories of positive items and 1, 2 and 3 to the negative items. Thus range of scores is 40 (minimum) to 120 (maximum). This scale has high inter-rater reliability, inter-scores reliability, and test-retest reliability. The scale has been found to be highly significant and satisfactory in validity. The reported test retest reliability of the inventory is 0.79 and the validity is 0.86.

Raven's Progressive Matrices (1938): It is a 60 item test used in measuring abstract reasoning and regarded as a non-verbal estimate of intelligence. It is made of 60 multiple choice questions, divided into five sets of 12 problems, listed in order of difficulty. In each test item, the subject is asked to identify the missing element that completes a pattern. After finding the right bit the respondent has to write the number on the scoring form against the number of the pattern. Many patterns are presented in the form of a 6x6, 4x4, 3x3, or 2x2 matrix, giving the test its name. All of the questions on the Raven's progressives consist of visual geometric design with a missing piece. The five sets provide five opportunities for grasping the method and five progressive assessments of a person's capacity

for intellectual activity. The scale is intended to cover the whole range of intellectual development. The problems are presented in the same order and there is no time limit. A person's total score provides an index of his intellectual capacity. A person's score on the scale is the total number of problems he solves correctly. The test has re-test reliability from 0.83 to 0.93. The scale is intended to span the whole range of intellectual development.

RESULTS

The relationship between the three variables, i.e. Intelligence, Personality and Well being was studied by computing inter correlations between the three variables. These have been tabulated in the following table.

Table1: Inter correlations between Intelligence, Personality and Well Being

	<i>Neuro</i>	<i>Extra</i>	<i>Open</i>	<i>Agre</i>	<i>Consc</i>	<i>SWB</i>
Intelligence	.047	-.089	.035	.136	.111	.193*
Neuroticism	-.185	.052	-.025	-.037	-.377**	
Extraversion	.326**	.321**	.395**	.157		
Agreeableness	.579**	.062				
Conscientiousness	.035					

** $p < 0.01$ * $p < 0.05$

The analysis revealed that the neuroticism personality factor demonstrated a significant negative correlation with psychological wellbeing, indicating that with increase in neuroticism score there is decrease in well being. Similar findings have been reported in earlier studies (DeNeve & Cooper, 1998; Diener, 2000; George, 1984; Vitesera, 2001; Wismijer & van Assen, 2008). These results are also supported by Magnus, Diener, Fujita, & Pavot (1993) who evidenced that individuals high in neuroticism experience more negative life event than others. Their behaviors includes being anxious, depressed, emotional, suspicious and insecure. Such individuals do not enjoy sound well being. Intelligence also demonstrated positive correlation with well being, indicating that people with more intellectual capacity enjoy well being. These results recieve support from Terman (1925), who explored the psychological characteristics of a group of high intellectual ability group of 643 elementary and middle-school aged children from California, with a control group. The former group was rated by teachers to have more positive interpersonal characteristics, goal-directed behavior, and creativity. Richards et.al. (2003) studied Australian adolescent students of normal and high intelligence with respect to their interpersonal, intrapersonal, and environmental activity. Results indicated more adaptive parent and teacher ratings for the intelligent students in domains of emotions and behavior suggesting, a positive relationship between intelligence and well being. Neihart (1999) exhaustively reviewed empirical literature with respect to the relationship between intelligence and well- being, and agreed that high intelligence has a beneficial factor to

psychological well-being. Thus, the first two hypothesis were verified by the present results.

Table 2. Significant predictors of well-being

Variable	Multiple R	R ²	F	
1 Neuroticism	.377	.143	16.951	***
2 Intelligence	.432	.187	11.618	***

***p<0.001

Stepwise regression analysis revealed that intelligence and the Big Five personality factor of neuroticism were strong predictors of well-being. Personality factor of Neuroticism was found to be the most pertinent predictor of well being; as it entered the equations at step one. The R for this variable equals to .377, while F (16.951), it is significant at .001 probabilities. Intelligence appeared as the second potent predictor which entered at step two and multiple R increased to .432 with the entry of Intelligence in the equation after Neuroticism. The F ratio computed for the significance of multiple R, at step two, equals to 11.618 which is significant at .001. The results of stepwise regression analysis revealed that these two variables significantly predict undergraduates' well-being. Thus the third hypothesis which stated that personality factors and intelligence will jointly predict psychological wellbeing was accepted by the result in Table 2. This indicates that the combined influence of personality factors and intelligence together have stronger association with psychological wellbeing of undergraduates. These results confirm the prognostic significance for intelligence and neuroticism on psychological well-being.

This study investigates the influence of personality factors and intelligence as predictors of psychological wellbeing among undergraduates in Haryana. Exploring psychological wellbeing from this stand point might help improve and proffer lasting solution to undergraduate student's psychological wellbeing. On the basis of results of the present study, it can be concluded that individuals enjoying low well-being had more neurotic behavior than the individuals enjoying sound well being. These individuals also indicate better intelligence by demonstrating a positive significant correlation with well being.

REFERENCES

- Argyle. (1987). *The psychology of happiness*. London: Methuen.
- Ball, S.A. (2005). Personality traits, problems and disorders, Clinical applications to substance use disorders. *Journal of Research in Personality*, 39, 84-102.
- Balogun, S.K., Bada, V. B., Adejuwon, A.G. (2013). Psychological factors predicting psychological wellbeing among spouses of incarcerated males in Ibadan, Nigeria. *Science Know Publications Ltd. HC* 1(3): 76-82 *Health Care*.
- Cheng, S. T., & Chan, A.C.M. (2005). Measuring psychological well-being in the Chinese. *Personality and Individual Differences*, 38, 1307-1316.

- Clarke, P.J., Victor, M. M., Carol, D., Ryff, C.D. & Wheaton, B. (2001). Measuring psychological well-Being in the Canadian. Study of health and aging. *International Psycho geriatrics*, 13(1): 79-90.
- Costa, P.T., & McCrae, R. R. (1992). Revised NEO personality inventory and NEO five factor inventory professional manual. *Odessa, FL: Psychological Assessment Resources*.
- Costa, P. T., & McCrae, R. R. (1992). Normal personality assessment in clinical practice: The NEO Personality Inventory. *Psychological Assessment*, 4(1), 5-13.
- De Neve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, 124: 197-229.
- Diener, E., & Lucas, R. E. (1999). Personality and subjective well-being. In D. Kahneman, E. Diener, & N. Flynn J. R. (1987). "Massive IQ gains in 14 nations: What IQ tests really measure". *Psychological Bulletin* 101, 171-191.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55, 34-43.
- Diener, E., & Suh, E. (2001). *Culture and subjective well-being*. Cambridge, Massachusetts: MIT Press.
- Emmons, R. A. (1986). Personal Strivings: An Approach to Personality and Subjective Wellbeing. *Journal of Personality and Social Psychology*, 51: 1058-1068.
- Flynn, J.R. (1987). Massive IQ gains in 14 nations: What IQ tests really measure. *Psychological Bulletin* 101, 171-191.
- Gilovich, T., & Eibach, R. (2001). The fundamental attribution error where it really counts. *Psychological Inquiry*, 12(1), 23-26.
- Haghshenas, H.(2009).Personality Psychology. Shiraz: *Medical Sciences University Publication*.
- Jahoda, M. (1958). *Current concepts of positive mental health*. New York: Basic books.
- Libran, E.C.(2006). Personality dimensions and subjective well being. *The Spanish Journal of Psychology*, 9(1), 38-44.
- Lopes, P.N., Salovey, P. & Straus, R. (2003). Emotional Intelligence, Personality, and the Perceived Quality of Social Relationships. *Personality and Individual Difference*, 35: 462.
- Magnus, K., Diener, E., Fujita, F., & Pavot, W. (1993). Extraversion and Neuroticism as Predictors of Objective Life Events: A Longitudinal Analysis. *Journal of Personality and Social Psychology*, 65: 1046-1053.
- McCrae, R. R., & Costa, P. T., Jr. (1986). Personality, Coping and Coping Effectiveness in an Adult Sample. *Journal of Personality*, 54: 385-405.
- Myers, D. (2002). *Exploring psychology* (5th d.) New York, Worth Publishers.
- Neihart, M. (1999). The impact of giftedness on psychological well-being. *Roeper Review*, 22(1), 10-17.
- Okun, M. A., & George, L. K. (1984). Physician- and self-ratings of health, neuroticism and subjective well-being among men and women. *Personality and Individual Differences*, 5, 533-539.
- Paunonen, S. V., & Ashton, M. C. (2001). Big Five Factors and Facets and the Prediction of Behavior. *Journal of Personality and Social Psychology*, 81: 524-539.
- Pudrovskas, T., Hauser, R.M. & Springer, K. (2005). Dimensions of Change in Psychological Well-Being across the Life Course. *Presented at the meetings of the American Sociological Association, Philadelphia, Pennsylvania*.

- Raven, J.C. Progressive Matrices (1938), *Manual for Raven's Progressive Matrices and Vocabulary Scales*. San Antonio, TX: Harcourt Assessment.
- Richards, J., Encel, J., & Shute, R. (2003), the emotional and behavioural adjustment of intellectually gifted adolescents: a multi-dimensional, multi-informant approach. *High Ability Studies*, 14(2), 153-164.
- Ryff, C. D. (1989). Happiness is everything, or is it Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069-1081.
- Schwarz (Eds.), *Wellbeing: The foundations of hedonic psychology* (pp. 213-229). New York: Sage Foundation.
- Sell, H., & Nagpal, R. (1992). *Assessment of Subjective Well-Being: The Subjective Well-Being Inventory*. Regional Health Paper, SEARO No. 24. New Delhi: World Health Organization.
- Spain, J. S., Eaton, L. G., & Funder, D. C. (2000). Perspectives on Personality: The Relative Accuracy of Self Versus Others for the Prediction of Emotion and Behavior. *Journal of Personality*, 68(5): 837-867.
- Suh, E.M. & Diener, E. (2001). The Role of the Self in Life Satisfaction Judgment: Weighing Emotions and Social Information Differently. *Work. Pap., Univ. Calif., Irvine*
- Terman, L. M. (1925). *Genetic studies of genius, Vol. 1: Mental and physical traits of a thousand gifted children*. Stanford: Stanford University Press.
- Vittersa, J. (2001). Personality traits and subjective well-being: Emotional stability, not extraversion, is probably the most important predictor. *Personality and Individual Differences*, 31, 903-914.
- Warr, P.B. (1978). A study of psycho-social wellbeing. *British Journal of Psychology*, 69, 111-121.
- Winefield, H. R., Gill, T. K., Taylor, A. W., & Pilkington, R. M. (2012). Psychological well-being and psychological distress: Is it necessary to measure both? *Theory, Research and Practice*, 2, 1-14. <http://dx.doi.org/10.1186/2211-1522-2-3>
- Wismeijer, A., & van Assen, M. (2008). Do neuroticism and extraversion explain the negative association between self concealment and subjective well being? *Personality and Individual Differences*, 45, 345-349.
- Wechsler, David (1958). *The Measurement and Appraisal of Adult Intelligence* (fourth ed.). Baltimore (MD): Williams & Witkins.
- Wechsler D. *Intelligence, Psychological Testing: Principles, Applications, and Issues*, on <https://www.intelltheory.com>, 30 Dec. 2014.
- Zachary, R. A. (1990). Wechsler's intelligence scales: Theoretical and practical considerations. *Journal of Psycho educational Assessment*, 8, 276-289.
- Zimbardo, P., Weber, A. L., & Johnson, R. L. (2000). *Psychology: Core concepts* (3rd ed.). Boston, MA: Allyn & Bacon

PSYCHO-SOCIAL FACTORS IN ALCOHOLISM: A REVIEW WITH EMPIRICAL EVIDENCE

Jyoti Sharma and Anita Sharma***

ABSTRACT

Alcoholism is a widely debated subject of research ever since the psychological research focused it. An attempt has been made to review the factors responsible for it. The following factors would be centered e.g. anxiety, impulsivity, extraversion, weak ego, low self esteem, low frustration tolerance, modeling and most importantly neuroticism. Further, the pilot surveys' outcome shows that rural and urban alcoholics differ accordingly with social class, the two factor interaction shows.

Key Words: Alcoholism, psycho-social factors, neuroticism

INTRODUCTION

Alcohol is the most available and widely abused substance. Alcohol is a sedative drug that leads to relaxation and slowed reactions (Conger, 1956). Alcohol can change our mood and mental state. Many people believe that drinking alcohol is a pleasant way to relax. Alcohol can produce a pleasant feeling. Alcoholism has multiple causes, with genetic, physiological, psychological, and environmental factors all playing a role (Vonder Pahlen, Santilla, Johansson, Varjonen, Jern, Witting, & Sandnabba, 2008).

Alcoholism may be acquired through negative reinforcement and modeling. Alcoholics learn to anticipate some benefits (stress reduction, relief from tension and boredom, pleasurable sensations, coping with negative feelings or situations, or avoiding withdrawal symptoms) from the addiction even though it is harmful. Addiction is the main cause of alcoholism. When people have poor coping skills, they are more vulnerable to addiction. High level of impulsivity – a risk factor

* Ph.D. Research Scholar, Psychology Department, H.P.U. Shimla-5.

** Associate Professor, Psychology Department, and Deputy Director, UGC-H.R.D.C., H.P.U. Shimla-5.

for addiction and dependence is also associated with alcohol use (Fernie, Peeters, Gullo, Christiansen, Cole, Sumnall, & Field, 2013 and Mitchell, & Potenza, 2014).

Environment is also a main cause of alcoholism which includes social, cultural, and behavioral influences. Not everyone is equally affected by each cause. Alcohol use at an early age may influence the expression of genes which increase the risk of alcohol dependence (Agrawal, Sartor, Lynskey, Grant, Pergadia, Grucza, & Heath, 2009 and Guttmanova, Bailey, Hill, Lee, Hawkins, Woods, & Catalano, 2011). Psychological traits (stress, anxiety and tension) and easy accessibility increases the risk factor for alcoholism (Moonat & Pandey, 2012) when alternative coping mechanisms are lacking. Alcohol can temporarily lighten stress and anxiety, because it alters the level of dopamine and norepinephrine as well as opioid peptides in a specific brain region. These neurochemical changes are experienced as excitation and because that experience can be pleasurable, people seek alcohol again. Although short term alcohol use may be reinforcing for many people, but as drinking is not an effective coping mechanism, their life situations do not improve (Banerjee, 2014).

Extraversion, anxiety and neuroticism are pure genetic variables expressed through personality makeup. Alcoholic personalities can be defined and characterized as dependent and immature, impulsive and sensitive. Alcoholics seem to experience more distress. They do not have the capacity to cope with negative feelings i.e. stress, anxiety, neuroticism and depression that's why they drink more to avoid their negative emotions. Alcoholics have very negative, passive, aggressive, antisocial and neurotic tendencies. They have low frustration tolerance and low self esteem. Alcohol makes them feel powerful or socially at ease or lessens their anxiety. They suffer from feeling of isolation and guilt (Nerviano & Gross, 1983; Mulder, 2002; Heesook Kim, 2004; Tragesser, Trull, Sher, & Park, 2008 and Moonsun Chang, Gipum Park, Seong-hoon Cheong, & Sangwoo Woo, 2011). Drinking to enhance positive emotional states has been shown to be associated with high levels of extraversion characterized as gregariousness, sociability and high level of excitement seeking (Stewart and Devine, 2000 and Theakston, Stewart, Dawson, Knowlden-Loewen, & Lehman, 2004). Extraverted individuals are those who are generally sociable, active and outgoing (Eysenck, 1967). Extraverts receive greater mood-enhancing effects from alcohol and show higher rates of heavy drinking (Brown & Munson, 1987, Grau & Ortet, 1999 and Anderson, Schweinsburg, Paulus, Brown, & Tapert, 2005) and initiate alcohol use at an earlier age (Hill, Shen, Lowers, & Locke, 2000).

Alcohol can be a positive reinforcer (producing positive sensation in the brain) and negative reinforcer (alleviating negative feeling such as anxiety, stress, low self esteem and tension). Neuroticism is a long-term tendency to be in a negative emotional state. According to Eysenck (1967), neurotic or introvert individuals show tendencies to develop anxiety and depressive symptoms, their feelings are

easily hurt and they are self-conscious (self-critical and self-blaming), have more inferiority complexes and panic very quickly. They experience strong negative feelings. They are more nervous, tense, stiff and irritable, are moody, less self-assured, day dream easily, are socially less fluent, feel shy and suffer from sleeplessness due to their weak nervous system. Neuroticism refers to maladaptive coping strategies. Neurotic doesn't have the capability to cope with the negative emotion, that's why they use alcohol to avoid that emotion (Forsyth, Parker, & Finlay, 2003). The neurotic personality type can be defined as experiencing negative emotions and having a tendency towards negative stimuli (Clark, Watson & Mineka, 1994 and Steunenberg, Beckman & Deeg, 2007). Alcohol use is only one of the several maladaptive coping strategies employed by neurotics in an attempt to deal with their frequent experiences of negative affect. Alcoholism is the best coping motive for neurotic adults (Stewart, Loughin & Rhyno, 2001 and Kuntsche, von Fischer, & Gmel, 2008). Other factors could be environmental.

These psychological traits are not the result of alcoholism but are the causes of alcoholism. Alcohol abuse itself is the result of the interaction between personal, environmental and socio-demographic factors. Social and environmental factors such as peer pressure, family environment, parent child relationship can also play key roles. The social part means how different social factors such as socioeconomic status, culture, poverty, technology and religion can influence alcohol use behaviour (Donovan, 2004 and Ramirez, Hinman, Sterling, Weisner, & Campbell, 2012).

From a biological point of view, males are more likely to drink alcohol and more likely to be alcohol dependent in comparison with females, reason being females have lower rates of gastric metabolism of alcohol than males (Thomasson, 1995 and Baraona, Abittan, Dohmen, Moretti, Pozzato, Chayes, Schaefer, & Lieber, 2001) and smaller volumes of body water in which the alcohol is distributed (Mirand & Welte, 1994). Thus, females may need to consume less alcohol than males to derive the same effects and may be more likely than males to experience unpleasant acute effects from alcohol.

Drinking and alcoholism are more common in rural area and middle economic class in Shimla and Kinnaur district of Himachal. Socio-economic-status and age factor are also associated with alcoholism. In the age of young adulthood, person experiences increased independence, decreased parental guidance, supervision and support, and more social contacts with peers, all these factors potentially contribute to increased alcohol use (Ilhan, Yildirim, Demirbas & Dogan, 2008). Adolescents from middle socio-economic status families experienced more restraints during adolescence; they might be more prone to excessive drinking when gaining independence. The middle class alcoholics may be more compulsive drinker who drinks partially to allay what is generally termed "Middle class anxiety". Status anxiety is harmful because it is a strong drive for achievement which leads to

stress, anxiety, psychological problems and alcoholism. This kind of anxiety means over fears of failure. People's tendency to compare themselves with their relatives and neighbor as a benchmark to fail to keep up is perceived as a sign of social inferiority, which in turn makes people anxious and engaged them alcohol use. It is expressed by insecurity of own achievement. The compulsive drinker would seem more apt to be led to further drinking, after he has been intoxicated, because of his sense of guilt over this behavior. It may be that the compulsive middle class drinker has a more basic problem and more complex one in recovering from alcoholism. In contrast, adolescents from lower socio-economic status group might experience a more permissive environment with regard to alcohol (Spijckerman, 2008).

Social support is another correlate of alcoholism which develops along with adaptive personality traits such as low hostility, low neuroticism, high optimism, as well as social and coping skills. People with low support have more alcohol and substance use (Wiegel, Sattler & Goritz, 2015). Negative correlations have been found between high level of social support and severity of alcoholism.

Family environment is also a very important factor for alcoholism. Poor family environment in terms of parental hostility, rejection and inconsistencies can all contribute to psychological problems viz. anxiety, stress, neuroticism, depression and many others (Sharma, Verma and Malhotra, 2008). Alcoholics perceive their family environment in a negative and poor interpersonal relationship with their parents. A healthy family environment and good parent-child relationship reduce the possibility of alcohol abuse, whereas, unhealthy family environment and poor parent-child relationship increase the possibility of alcoholism. A family history of alcoholism doesn't mean that children will automatically grow up to have the same problems. Nor does the absence of family drinking problems necessarily protect children from developing these problems.

The experience of maltreatment in the home, high level of family tension or conflict is also a risk factor for alcoholism. In contrast, supportive and cohesive families protect from alcoholism. A lack of support and sense of rejection and detachment from parents have been associated with adolescent substance use and further leads to future alcohol involvement (Turner, Irwin, Tschann, & Millstein, 1993).

Families of alcoholics have lower levels of family cohesion, expressiveness, independence, and intellectual orientation and higher levels of conflict, high level of openly expressed anger, aggression and conflict (Filstead, McElfresh, & Anderson, 1981 and Moos & Billing, 1982). An alcoholic family environment is characterized by disruption, deviant parent role models, inadequate parenting and disturbed parent-child relationships. Children of alcoholics are four times more likely than children of non-alcoholics to develop alcoholism. Both genetic and environmental factors influence the development of alcoholism (Ellis, Zucker &

Fitzgerald, 1997 and Crabbe, 2002). Alcoholics often grow up in an environment initiation into alcohol use, and lack of parental warmth and communication. Family members often play an important role in the lives of those who abuse alcohol (Velleman, 1992, 2005).

Parent-child relationship is very important factor for alcoholism. Deficits in parental support partially mediate the association between low parental education and increased substance use among teens (Wills, McNamara, & Vaccaro, 1995). Impaired problem-solving ability and hostile communication are observed in alcoholic families.

A lack of parental monitoring, family's interaction, family structure, paternal alcohol use, peer influences and parenting styles are associated with greater levels of drinking and greater increase in use (Adalbjarnardottir & Hafsteinsson, 2001 and Mrug & McCay, 2013). Positive interactions, protective parents and parental respect protect against future alcohol use and peer influence to use (Donovan, 2004).

Alcoholic parents have a negative effect on their children because the effect of alcohol undermines their capacity to use their parenting skills in a number of ways. Children of alcoholic parents can develop a number of emotional problems. Excessive drinking by the parents can lead to inconsistent parenting behavior. Parents are unable to respond appropriately to a child's improper behavior. Negative parent-child relationship is related to externalizing problems such as aggressive and delinquent behavior (Allen, Porter, McFarland, McElhaney, & Marsh, 2007). When the child misbehaves in a certain way, the parents may overreact by screaming at the child on one occasion; on another occasion, parents may act indulgently towards the child. Consequently, the child receives mixed signals about appropriate behavior. In addition, the inconsistency in parenting behaviors creates an unpredictable and unstable environment. They become afraid of their parents, because of their unstable mood behaviors. Negative parent-child relationship is expressed in rejection, criticizing ideas frequently, having frequent arguments or with holding of affection (Maccoby, 1992). Further, a negative parent-child relationship is related to an increased likelihood of internalizing problems such as depressive symptoms and anxiety (Brumariu & Kerns, 2010). The positive parent-child relationship has a negative linear relationship with adolescent drinking (Ryan, Jorm, & Lubman, 2010).

Higher level of parental warmth is associated with significantly reduced alcohol use (Wilson, 2008). High parental expectations, involvement and monitoring and genuine affection have been found to be negatively associated with alcoholism. Deviant peers or overprotection has been found to be positively associated with alcoholism and drug use. Parental over-monitoring and over protection have negative effects on their children's development (Donaldson, Handren, & Crano, 2016). It involves withdrawal of warmth and support.

According to Berk (2007), there are four different parenting styles: authoritative, authoritarian, permissive, and uninvolved which is associated with alcoholism in adulthood.

Authoritative parenting has been associated with a lower likelihood of adolescent substance use (Baumrind, 1991). Authoritative parents are more demanding and responsive to their children and appear to protect against substance use (Jackson, Henrikson & Foshee, 1998). Authoritative parents encourage verbal give and take, convey the reasoning behind rules, and use reason, power, and shaping to reinforce objectives. This parenting style is most often associated with positive outcomes and the most effective and beneficial style of parenting among most families. Authoritative parents' children are less prone to externalizing behaviors, and specifically are less likely to engage in drug use and alcoholism. Authoritative parents are often "controlling and demanding" (Kusmierski, Nichols, & McDonnell, 2001), but at the same time are "warm, attentive, and sensitive to their child's needs". The authoritative parenting style is associated with the lowest levels of depression, higher level of well-being such as higher self-esteem and life-satisfaction (Simons & Conger, 2007) and protect from drug use and alcohol use.

Authoritarian parents are low in responsiveness, highly demanding, emphasize obedience and conformity and expect that rules be obeyed without explanation (Baumrind, Larzelere & Owens, 2010). Authoritarian parents show low levels of trust, discourage open communication, and engage in strict control which leads to poor social skills, low levels of self-esteem, and high level of depression (Milevsky, Schlechter, Netter & Keehn, 2007). Authoritarian parents are seen as more detached, colder, and more disciplinarian (Patock-Peckham & Morgan-Lopez, 2007).

Extra permissive almost indifferent parenting is characterized by high level of responsiveness, low level of demandingness, do not set rules, avoid engaging in behavioral control and set few behavioral expectations and more likely to engage in drug use and alcoholism (Luyckx, Tildeley, Soenens, Andrews, Hampson, Peterson, & Duriez, 2011).

Uninvolved parenting style has the most negative effect. Uninvolved parenting is characterized by parents who often fail to monitor or supervise their child's behavior and do not support or encourage their child's self-regulation, low in responsiveness and low in demandingness, low self-esteem, depressive symptoms (Baumrind, Larzelere, & Owens, 2010). Individuals who perceived their parents as uninvolved used more drugs compared to who perceived their parents as authoritative (Adalbjarnardottir, & Hafsteinsson, 2001).

Parental support is defined as the presence of close, caring, and accepting relationships between an adolescent and his or her caregivers. Higher level of parental warmth (giving emotional affection or praising, active listening,

encouraging or showing respect) is associated with high self esteem and significantly reduced alcohol use and substance use. Higher level of perceived parental support is associated with lower level of adolescent delinquency, aggression, or other adjustment problems (Barnes, Hoffman, Welte, Farrell & Dintcheff, 2006 and Wilson, 2008). An alcoholic's behavior and mental impairment, while drunk, can profoundly affect those surrounding them and lead to isolation from family and friends. This isolation can lead to family conflict, poor family environment and contribute to domestic violence. Alcoholism can also lead to child neglect, with subsequent lasting damage to the emotional development of the alcoholic's children. As a result of this failure, they develop wretched self-images, which can lead to depression (Gold, Mark, 2011). The genetic and demographical variables play a crucial role in alcoholism and have been delineated here by the investigators.

As a sequel to the review, a pilot study was conducted for presentation with empirical evidence for the most significant factor i.e. neuroticism. The neuroticism and anxiety complement each other. In the context of recent empirical data, the authors have explored the factor (Neuroticism) responsible for alcoholism. The result of the pilot survey has been shown as under:

Table 1: 2X3 ANOVA on Neuroticism

Source of Variance	Sum of Squares	df	Mean Square	F-Ratio
Urban/Rural Area (A)	.067	1	.067	.034
Upper, Middle and Lower Class (B)	5.433	2	2.717	1.371
Urban/Rural X Class (Ax B)	18.433	2	9.217	4.651**
Error	107.000	54	1.981	
Total	130.933	59		

** : Significant at $p < .01$

Table 2: Means Table for Area and Class on the Variable of Neuroticism among Alcoholics

Variables	Area		Class		
	Urban	Rural	Upper	Middle	Lower
Neuroticism	7.17	7.1	7	7.55	6.85

Table-3: AXB Means Contingency Table: Interaction Effect of Area and Class on Neuroticism

	Upper Class Alcoholics	Middle Class Alcoholics	Lower Class Alcoholics
Urban	6.4	7.5	7.6
Rural	7.6	7.6	6.1

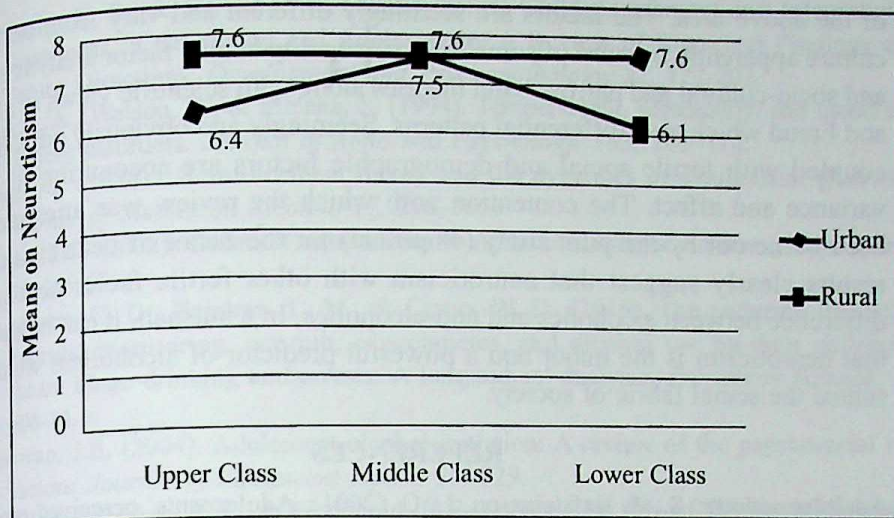


Figure 1: Interaction effect of AXB on Neuroticism

Neuroticism is a key predictor of higher levels of stress and depressive symptoms. The present study indicates that neuroticism scores tend to be higher among rural area alcoholics with upper socio-economic status, whereas, urban area alcoholics with lower socio-economic status show more neurotic traits. They are living in the slum area and have lack of social support. Unemployment and long term stress are the main cause of neuroticism for lower class. Chronic stress created through longer durations of poverty or unemployment increases the likelihood of heavy drinking (Mossakowski, 2008). Our findings reveal that in urban area, poverty and lower socio-economic status are the main causes of stress and neuroticism. Higher level of stress, tension, depression and lower level of social support are the factors which are positively associated with neuroticism and increased alcohol use in urban lower class sample. Lower economic status person believes that poverty results from personal failing. In stressful times social support helps people reduce psychological distress (Taylor, 2011), whereas in rural area upper class alcoholics maintain their lordship that's why they drink more. In rural area middle and lower class, people have enough social networks to cope with stressful environment. An empirical evidence on a minor sample of $N=60$ reveals that on the variable of neuroticism on urban/rural and class reveals as indicated earlier that neuroticism is a powerful indicator of alcoholic personality.

On upper class end, the rural alcoholics consume significantly more alcohol than rural because the rural are feudal lords and shows their superiority by taking to alcohol. To the contrary, in the lower class level, urban alcoholics take more because of the environment and dwells nearly in the slum like conditions.

CONCLUSION

Alcoholism is the artifact of social, psychological and demographical factors. The present review has attempted to focus the various factors falling in the gamut

- Kuntsche, E.N., von Fischer, M., & Gmel, G. (2008). Personality factors and alcohol use: A mediator analysis of drinking motives. *Personality and Individual Differences*, 45, 796-800.
- Kusmierski, S., Nichols, J., & McDonnell, R. (2001). Do Parenting Styles Influence Alcohol Use and Binge Drinking During High School and College? *UW-La Crosse Journal of Undergraduate Research*, IV, 63-70.
- Luyckx, K., Tildeley, E.A., Soenens, B., Andrews, J.A., Hampson, S.E., Peterson, M., & Duriez, B. (2011). Parenting and trajectories of children's maladaptive behaviors: A 12-year prospective community study. *Journal of Clinical Child and Adolescent Psychology*, 40, 468-78.
- Maccoby, E.E. (1992). The role of parents in the socialization of children: an historical overview. *Developmental Psychology*, 33, 1006-17.
- Milevsky, A., Schlechter, M., Netter, S., & Keehn, D. (2007). Maternal and paternal parenting styles in adolescents: Associations with self-esteem, depression and life-satisfaction. *Journal of Child and Family Studies*, 73, 39-47.
- Mirand, A.L., & Welte, J.W. (1994). Total body water adjustment of mean alcohol intakes. *Journal of Substance Abuse*, 6, 419-25.
- Mitchell, M.R., & Potenza, M.N. (2014). Addictions and personality traits: impulsivity and related constructs. *Current Behaviour Neuroscience Report*, 1, 1-12.
- Moonat, S., & Pandey, S.C. (2012). Stress, epigenetics, and alcoholism. *Alcohol Research*, 34(4), 495-505.
- Moonsun Chang, Gipum Park, Seong-hoon Cheong, & Sangwoo Woo. (2011). The relationship of psychological characteristics of dependent and avoidant, and personality traits of addiction. *Journal of Korea East-West*, 14(1), 13-31.
- Moos, R.H., & Billing, A.G. (1982). Children of alcoholics during the recovery process: Alcohol and matched control families. *Addictive Behaviours*, 7, 155-63.
- Mossakowski, K. (2008). Is the duration of poverty and unemployment a risk factor for heavy drinking? *Social Science and Medicine*, 67, 947-55.
- Mrug, S., & McCay, R. (2013). Parental and peer disapproval of alcohol use and its relationship to adolescent drinking: age, gender, and racial differences. *Psychology of Addictive Behaviors*, 27(3), 604-14.
- Mulder, Roger T. (2002). Alcoholism and personality. *Australian and New Zealand Journal of Psychiatry*, 36(1), 44-52.
- Nerviano, V., & Gross, W. (1983). Personality types of alcoholics in objective inventories. *Journal of Studies on Alcohol*, 44, 837-51.
- Patock-Peckham, J. A., & Morgan-Lopez, A. A. (2007). College Drinking Behaviors: CAN PARENTS CREATE ALCOHOLICS? Meditational Links Between Parenting Styles, Parental Bonds, Depression, and Alcohol Problems. *Psychology of Addictive Behaviors*, 21(3), 297-30.
- Ramirez, R., Hinman, A., Sterling, S., Weisner, C., & Campbell, C. (2012). Peer Influences on Adolescent Alcohol and Other Drug Use Outcomes. *Journal of Nursing Scholarship*, 44, 36-44.
- Ryan, S.M., Jorm, A.F., & Lubman, D.I. (2010). Parenting factors associated with reduced adolescence alcohol use: A systematic review of longitudinal studies. *Australian and New Zealand Journal of Psychiatry*, 774-83.
- Sharma, A., Verma, R., & Malhotra, D.K. (2008). The role of pathogenic family patterns in the development of generalized anxiety in the urban and rural women. *Journal of Personality and Clinical Studies*, 24, 183-92.

- Simons, L. G., & Conger, R. D. (2007). Linking mother-father differences in parenting to a typology of family parenting styles and adolescent outcomes. *Journal of Family Issues*, 28, 212-41.
- Spijkerman, R., van den Eijnden, R.J.J.M., & Huiberts, A. (2008). Socioeconomic differences in alcohol-specific parenting practices and adolescents' drinking patterns. *European Addiction Research*, 14, 26-37.
- Steenenbergh, B., Beekman, A.T., Deeg, D.J., Bremmer, M.A., & Kerkhof, A.J. (2007). Mastery and neuroticism predict recovery of depression in later life. *The American Journal of Geriatric Psychiatry*, 15(3), 234-42.
- Stewart, S.H., & Devine, H. (2000). Relations between personality and drinking motives in young adults. *Personality and Individual Differences*, 29, 495-511.
- Stewart, S.H., Loughin, H.L., & Rhyno, E. (2001). Internal drinking motives mediate personality domain drinking relations in young adults. *Personality and Individual Differences*, 30, 271-86.
- Taylor, S.E. (2011). Social support: A Review. In M.S. Friedman. *The Handbook of Health Psychology*. New York, NY: Oxford University Press. pp. 189-214.
- Theakston, J.A., Stewart, S.H., Dawson, M.Y., Knowlden-Loewen, S.A.B., & Lehman, D.R. (2004). Big-Five personality domains predict drinking motives. *Personality and Individual Differences*, 37, 971-84.
- Thomasson H.R. (1995). *Gender differences in alcohol metabolism*. In: Galanter, M., ed. *Recent Developments in Alcoholism: Women and Alcoholism*. New York: Plenum Press, 163-79.
- Tragesser, S.L., Trull, T.J., Sher, K.J., & Park, A. (2008). Drinking motives as mediators in the relation between personality disorder symptoms and alcohol use disorder. *Journal of Personality Disorders*, 22, 525-37.
- Turner, R.A., Irwin, C.E. Jr., Tschann, J.M., & Millstein, S.G. (1993). Autonomy, relatedness and early initiation of health risk behaviors in early adolescence. *Health Psychology*, 12, 200-08.
- Velleman, R. (1992). Oh my drinking doesn't affect them, families of problem drinkers. *Clinical Psychology Forum*, 48, 6-10.
- Velleman, R.B., Templeton, L.J., & Copello, A.G. (2005). The role of the family in preventing and intervening with substance use and misuse: A comprehensive review of family interventions, with a focus of young people. *Drug and Alcohol Review*, 24, 93-109.
- Vonder Pahlen, B., Santilla, P., Johansson, A., Varjonen, M., Jern, P., Witting, K., & Sandnabba, N. (2008). Do the same genetic and environmental effects underlie the co-variation of alcohol dependence, smoking, and aggressive behaviour? *Biology Psychiatry*, 78, 269-77.
- Wiegel, C., Sattler, S., & Goritz, A. S. (2015). Work-related stress and cognitive enhancement among university teachers. *Anxiety, Stress, & Coping*, 1-18.
- Wills, T., McNamara, G., & Vaccaro, D. (1995). Parental education related to adolescent stress-coping and substance abuse: development of mediational model. *Health Psychology*, 14, 464-78.
- Wilson, C. (2008). The influence of parental warmth and control on Latino adolescent alcohol use. *Hispanic Journal of Behaviour Science*, 30, 89-105.

EMOTIONAL INTELLIGENCE AMONG CUSTOMER TACKLING AND HOUSEKEEPING STAFF OF INDIAN RAILWAYS

Lovely Gyan* and Archana Shukla**

ABSTRACT

Emotional Intelligence has been identified as one of the paramount behavioral constructs considered to be a major contributor to performance. The awareness about the tenets of emotional intelligence leads to insights into self-regulation and realization of one's optimum potential for better performance. In the present study an attempt has been made to explore emotional intelligence of railway employees and bring about a comparative analysis of emotional intelligence among customer tackling staff and housekeeping staff of Indian railways. Further emotional intelligence scores were also analyzed to ascertain the gender differences in emotional intelligence among railway employees. This was an exploratory study done on 200 railway employees of Lucknow division. The Bar-On EQ-i (1997) is used to measure emotional intelligence. The data was analyzed by SPSS software using descriptive statistics and 2x2 analysis of variance (ANOVA). The results show that the customer tackling staff of Lucknow division scored higher than the housekeeping staff. The respondents of customer tackling staff scored better not only on overall score of emotional intelligence but on all the five dimensions of emotional intelligence-Intrapersonal EI, Interpersonal EI, Adaptability EI, stress management EI, General mood EI. Female respondents scored higher than the male respondents on overall emotional intelligence score, Stress management EI and adaptability scale. Keeping in mind, the customer satisfaction, it would be better for railways if all the employees are high

* 568-Ka/440, Near Durga temple, Alambagh Lucknow-226005 or to email: lgstars.rly@gmail.com.

** Dean, Faculty of Arts & Director, AIBAS, Amity University Haryana or to Email: profarchana.shukla@gmail.com / ashukla@ggn.amity.edu

on emotional intelligence as the productivity and success of this organization is a synchronized effort of all the employees and cadres. Effective measures can be adopted to improve the emotional intelligence of housekeeping staff of railways.

Key Words: Emotional intelligence, Customer tackling staff, Housekeeping staff, Indian railway.

INTRODUCTION

Emotional intelligence has emerged as an important constructs in today's world. It not only leads to positive outcomes like academic achievement and organizational productivity, it is also related to lower levels of stress and depression. The importance of emotional intelligence has been accepted in all spheres of life as it has been found to contribute to well being and psychological health at personal level and success and effectiveness at organizational level.

This is the reason emotional intelligence has become the most popular and most extensively researched phenomena among behavioral scientists. Goleman defined EI as 'the capacity for recognizing our own feelings and those of others, for motivating ourselves and for managing emotions well in ourselves and in our relationships'. So, emotional intelligence refers to various things including empathy, motivation, sociability, warmth and optimism. People with high emotional intelligence can better perceive emotions, use them in thoughts, understand their meanings and manage emotions better than others.

In today's business world performance relies highly on workplace relationships, adaptability, stress tolerance and group effectiveness, the phenomena of EI has become integral to occupational success. The ability to effectively deal with emotions and emotional information in the workplace assists employees in addressing occupational stress and thereby retaining psychological health. Recent studies have argued that organizationally expected emotions are closely related to occupational stress.

Indian railways, the biggest public sector undertaking of the country, play a vital role in the socio-economic development of the nation comprising the chief mode of transport for passengers and freight traffic. Besides that this mammoth sprawling network is also the biggest labor intensive industry in the country.

The Indian Railways consists of different departments as only one department cannot control the movement of trains & its maintenance. The manpower of Indian railways can be classified in varied ways like according to cadre wise or hierarchy wise or department wise. Since Indian railway is primarily a utility based organization and its ultimate goal is to provide best services to its customers. So the classification may be.

Customer tackling staff are those who are in direct contact with customers e.g. ticket collector, checking staff, booking clerk, parcel clerk, ERCs, RPF personnel etc. these staff primarily belonged to commercial and safety department.

Housekeeping staff are those who deal with files, machines and equipments and are not in direct contact with customers e.g. office clerks, supervisors, maintainer etc.

Objectives

The main objectives of the study were twofold:

- (1) To explore the emotional intelligence of the customer tackling and housekeeping staff of railways and
- (2) To examine the gender related differences in emotional intelligence among railway employees.

Hypotheses

Based upon gender role stereotypes and studies on organizational psychology two hypotheses are formulated and tested in the present study. These are:

H1: Customer tackling staffs are more emotionally Intelligent than the housekeeping staff of railways.

H2: Males and females are equally intelligent.

METHOD

Sample

A total of 200 railway employees constituted the sample for the study. They were divided into two groups-CTS (Customer Tackling Staff) and HKS (House Keeping Staff). These groups were further divided into two groups- males and females-to see the gender effect.

Sample statistics are as follows:

Category of Education	Males		Females		Total
	HKS	CTS	HKS	CTS	
Graduates	32	41	23	38	134
Under Graduates	18	9	27	12	66
Marital Status					
Married	36	38	40	34	148
Unmarried	14	12	10	16	52
Total Service rendered					
5 to 10 years	15	13	17	25	70
10 to 15 years	21	17	21	15	74
15 to 20 years	14	20	12	10	56

Measures

Bar-On EQi (1997) was used to measure emotional intelligence with slight modification as per the need of sample. Bar-On EQi had 95 items assessing 8

major dimensions of Emotional Intelligence— (i) Intrapersonal EI, (ii) Interpersonal EI, (iii) Stress Management EI, (iv) Adaptability EI and (v) General Mood. All the items shown above were to be rated on a 5 point scale from 'very often true to me' (scored as 5) to 'very seldom and or not true for me' (scored as 1). Out of total 95 items 48 item were reversing scored.

The whole sample was divided into two categories depending upon the nature of job in their work place. The criteria for this variable was whether the staff is in direct contact with customer or dealing with house-keeping works that does not involve customer tackling nature of work. There was one demographic factor—gender. So in each group there were 50 female respondents & 50 male respondents.

Procedure

Data were collected by administering questionnaires in face to face personal interviews. Some questions were framed to know about their work profile. The data obtained from administering questionnaires to 200 respondents were tabulated and put to statistical analysis. The quantitative analysis included means, standard deviations and 2x2 analysis of variances. These analyses were aimed at identifying differences related to gender and nature of work on dimensions of Emotional Intelligence.

RESULTS

The results obtained from basic statistics and ANOVA are presented in table 1.1 to 1.6. Each of these tables has two parts: Means and SDs are contained in Part A, summary ANOVAs are contained in Part B. A graphical depiction of mean scores are shown in Part C, whenever the interaction effect that was found significant. Table 1.7 shows all ANOVAs; main and interaction effects.

Table 1: Emotional Intelligence

A: Means & Standard deviations:

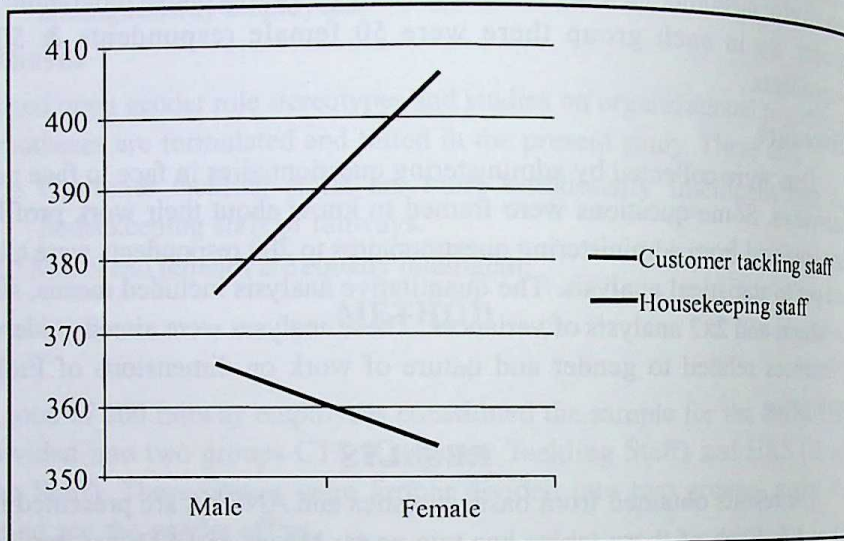
Nature of Job	Gender	Mean	Std. Dev.	N
Customer tackling staff	Male	375.7	35.12	50
	Female	406.1	23.20	50
	Total	390.9	33.32	100
Housekeeping staff	Male	365.6	37.06	50
	Female	354.6	39.35	50
	Total	360.1	38.43	100
Total	Male	370.6	36.27	100
	Female	380.3	41.26	100
	Total	375.5	39.06	200

B: Summary of ANOVA

Source of Variation	Sum of Squares	Df	MS	F	Sig.
Nature of Job	47432.000	1	47432.000	47.347	.000
Gender	4704.500	1	4704.500	4.696	.031
Nature of job x Gender	21424.500	1	21424.500	21.386	.000

C. Graphical representation of Means (overall emotional intelligence)

(i) Interactive Effect of Nature of Job and Gender

**Table 2: Emotional Intelligence: Dimension 1: Intrapersonal****A: Means & Standard deviations:**

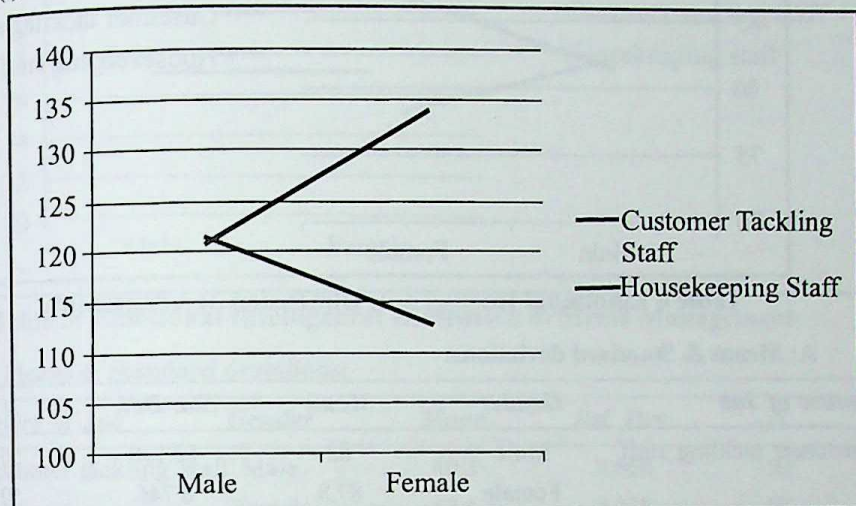
Nature of Job	Gender	Mean	Std. Dev.	N
Customer tackling staff	Male	120.6	11.563	50
	Female	133.9	8.420	50
	Total	127.2	12.080	100
Housekeeping staff	Male	121.4	11.825	50
	Female	112.9	15.917	50
	Total	117.1	14.590	100
Total	Male	121	11.643	100
	Female	123.4	16.488	100
	Total	122.2	14.288	200

B: Summary of ANOVA

Source of Variation	Sum of Squares	Df	MS	F	Sig.
Nature of Job	5100.500	1	5100.500	39.053	.000
Gender	288.000	1	288.000	2.205	.139
Nature of job x Gender	5940.500	1	5940.500	45.485	.000

C. Graphical representation of Means (Intrapersonal)

(i) Interactive Effect of Nature of Job and Gender

**Table 3 Emotional Intelligence: Dimension 2: Interpersonal****A: Means & Standard deviations:**

Nature of Job	Gender	Mean	Std. Dev.	N
Customer tackling staff	Male	81.3	5.679	50
	Female	86.5	3.105	50
	Total	83.9	5.250	100
Housekeeping staff	Male	82	6.161	50
	Female	78.2	9.484	50
	Total	80.1	8.182	100
Total	Male	81.6	5.905	100
	Female	82.3	8.167	100
	Total	82	7.117	200

B: Summary of ANOVA

Source of Variation	Sum of Squares	Df	MS	F	Sig.
Nature of Job	722.000	1	722.000	17.745	.000
Gender	24.500	1	24.500	.602	.439
Nature of job x Gender	1012.500	1	1012.500	24.885	.000

C. Graphical representation of Means (Interpersonal)

(i) Interactive Effect of Nature of Job and Gender

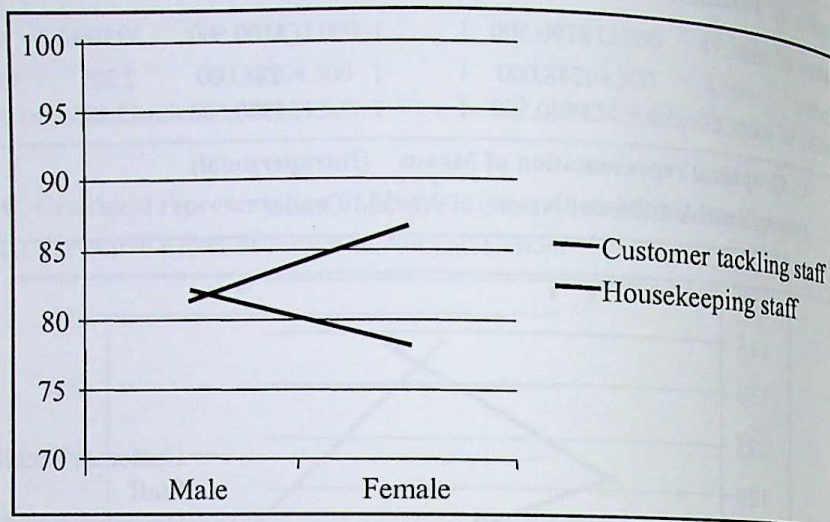


Table 4 Emotional Intelligence: Dimension 3: Adaptability

A: Means & Standard deviations:

Nature of Job	Gender	Mean	Std. Dev.	N
Customer tackling staff	Male	82	12.138	50
	Female	87.8	8.746	50
	Total	84.9	10.922	100
Housekeeping staff	Male	77.1	11.097	50
	Female	77.2	7.716	50
	Total	77.1	9.510	100
Total	Male	79.5	11.830	100
	Female	82.5	9.783	100
	Total	81.0	10.928	200

B: Summary of ANOVA

Source of Variation	Sum of Squares	Df	MS	F	Sig.
Nature of Job	3003.125	1	3003.125	36.512	.000
Gender	435.125	1	435.125	5.290	.023
Nature of job x Gender	406.125	1	406.125	4.938	.027

C. Graphical representation of Means (Adaptability)

(i) Interactive Effect of Nature of Job and Gender

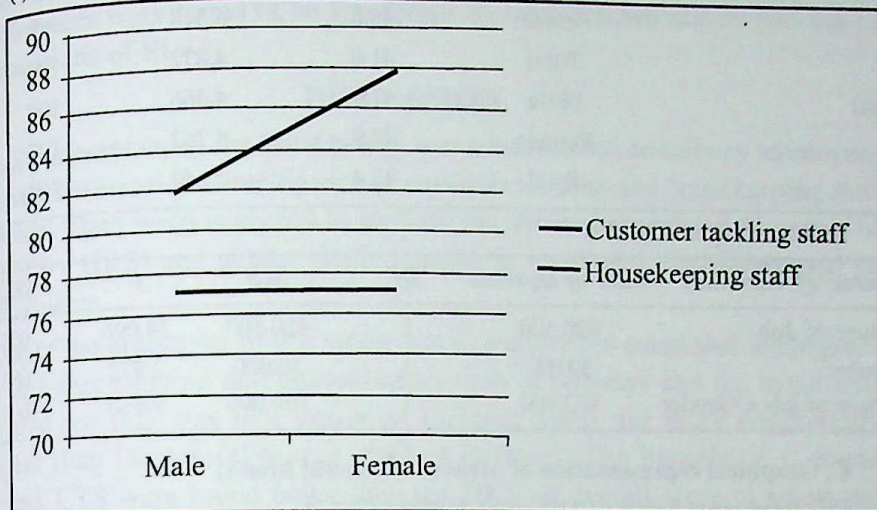


Table 5: Emotional Intelligence: Dimension 4- Stress Management

A: Means & Standard deviations:

Nature of Job	Gender	Mean	Std. Dev.	N
Customer tackling staff	Male	40.3	9.668	50
	Female	52.6	4.338	50
	Total	50.9	7.637	100
Housekeeping staff	Male	43.7	8.536	50
	Female	45.7	7.546	50
	Total	44.7	8.078	100
Total	Male	46.5	9.500	100
	Female	49.1	7.037	100
	Total	47.8	8.443	200

B: Summary of ANOVA

Source of Variation	Sum of Squares	Df	MS	F	Sig.
Nature of Job	1953.125	1	1953.125	38.406	.000
Gender	351.125	1	351.125	6.905	.009
Nature of job x Gender	21.125	1	21.125	.415	.520

Table 6: Emotional Intelligence: Dimension 5- General Mood

A: Means & Standard deviations:

Nature of Job	Gender	Mean	Std. Dev.	N
Customer tackling staff	Male	42.5	4.743	50
	Female	45.3	2.121	50

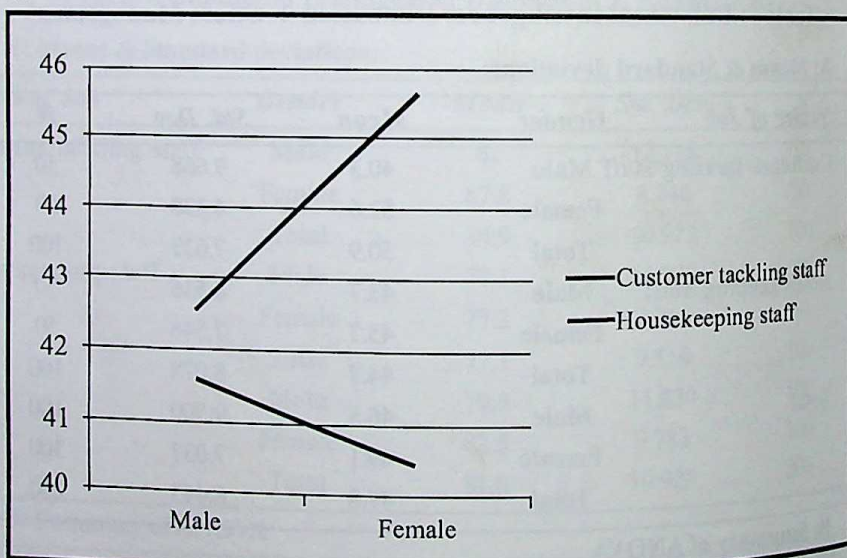
	Total	44.8	3.188	100
Housekeeping staff	Male	41.4	4.145	50
	Female	40.6	5.518	50
Total	Total	41.0	4.872	100
	Male	41.9	4.466	100
	Female	42.9	4.783	100
	Total	42.4	4.642	200

B: Summary of ANOVA

Source of Variation	Sum of Squares	Df	MS	F	Sig.
Nature of Job	420.500	1	420.500	24.996	.000
Gender	50.000	1	50.000	2.972	.086
Nature of job x Gender	162.000	1	162.000	9.630	.002

C. Graphical representation of Means (General Mood)

(i) Interactive Effect of Nature of Job and Gender

**Table 7: Summary of all ANOVAs: Significant Main and Interaction Effects**

Classificatory Variables	Nature of Job	Gender
Psychological Variables	(CTS-HKS)	
Overall EI	CTS>HKS	F>M
Intrapersonal EI	CTS>HKS	
Interpersonal EI	CTS>HKS	
Stress Management EI	CTS>HKS	F>M
Adaptability EI	CTS>HKS	F>M
General Mood EI	CTS>HKS	

The results indicate that CTS group is having higher emotional intelligence than the HKS group. The females are found to score higher than the males and that differences were found to be significant on overall score and on two out of five dimensions of EI.

DISCUSSION

In the present study the Bar-On EQi was administered on railway employees to ascertain the emotional intelligence of customer tackling and housekeeping staff of railways. Data were analyzed to explore the differences related to nature of work (CTS - HKS) and gender (male-female) in emotional intelligence and its various aspects.

One of the objectives of this study was to explore the emotional intelligence of the customer tackling and housekeeping staff of railways and the hypothesis formulated for this was that customer tackling staffs are more emotionally intelligent than the housekeeping staff of railways. The hypothesis is found confirmed. CTS were found better than the HKS on overall score of emotional intelligence and also on all the five dimensions of EI.

The customer tackling staffs are supposed to be all the time in direct contact with customers. They are the 'face of railways' for general public. In case of ticket booking, luggage booking, ticket checking, any query regarding train movement etc or in incidents like accident, train running late cases, theft, and sickness during travelling, these CTS are the representatives of railway to tackle the situation. One to one interaction takes place there. The promptness on duty, courteous behavior, problem solving attitude, empathetic outlook are some important characteristics which help them to carry out their duties in the best way. The soft skills are predominant aspect of their duty.

In the present study it can be seen that on all the aspects of EI and overall also the CTS respondents have done better. The daily interactions with customers and regular encounters with stressful situations enhance their emotional intelligence. It has been observed that unlike intelligence quotient, emotional quotient can be improved throughout life. Though the importance of emotional intelligence cannot be taken lightly for housekeeping staff but the point here is that the usual and routine work may not require that much emotional competence and so their emotional intelligence may not be getting an edge there.

Dana Joseph and Daniel Newman, 2010 found that in jobs that required extensive attention to emotions, higher emotional intelligence translated into better performance. In jobs that involved fewer emotional demands, the results reversed. For example Salespeople, real-estate agents, call-center representatives, and counselors all excelled at their jobs when they knew how to perceive and regulate emotions—they were also able to deal more effectively with stressful situations and provide service with a smile.

Second objective of this study was to examine the gender related differences in emotional intelligence among railway employees. A review of EI literature shows inconsistent findings with regard to gender differences. Some studies show men are better at regulating emotions, while others report women to be better at emotional attention and empathy. In view of contradictory results with respect to implications of gender on emotional intelligence a null hypothesis was formulated which is found rejected in this study. Females are found to be more emotionally intelligent than the males.

In the present study it can also be observed that female railway employees have scored better on two dimensions of EI out of five dimensions. These two dimensions are: Stress management and Adaptability.

A common perception is that women work better with others; men deal better with stress. According to Dr. Steven Stein, "Our results suggest that women are more aware of their feelings and those of others, relate better interpersonally, and are significantly more socially responsible than men. On the other hand, men seem to have stronger self-regard and cope better with immediate problems of a stressful nature than women." According to Bar-On (2000) males and females have similar overall EQs but males score higher in intra personal, adaptability and stress management domains while females score higher in inter personal domain.

It is evident by this very finding of the present study that women are also having the emotional competence of stress management and Adaptability.

CONCLUSION

This article primarily draws a comparative picture of emotional intelligence among customer tackling and housekeeping staff of railways. It demonstrates that nature of work is an important factor in and holds a heavy impact on emotional intelligence. Women are found better than men on the dimension of adaptability and stress management which presents a picture of progressing women in India.

IMPLICATIONS

The present study is focused on emotional intelligence of railway employees. The study suggests taking some constructive steps to organize EI training sessions for the housekeeping staff. It would be wonderful if housekeeping staff may be deployed, after requisite training, to do works where they can face the customers directly. As each and every unit of manpower is important asset for the gigantic organization of Indian railways.

REFERENCES

- Goleman, D. (1998). Working with emotional intelligence. New York: Bantam Books. Goleman, D. (2001). *Emotional Intelligence: Issues in paradigm building*. In C. Cherniss and D. Goleman (Ed's.), *The Emotionally Intelligence Workplace*. San Francisco: Jossey-Bass.
- Vol. 12, No. 1, September, 2017

- Bar-On, F., Brown, J. M., Kirkcaldy, B. & Thome, E. (2000). Emotional Expression and implications for occupational stress; an application of the Emotional Quotient Inventory (EQ-I). *Personality and Individual Differences*, 28, 1107-1118.
- Singh, D. (2003). *Emotional Intelligence at Work: A professional Guide*. Second Edition Sage Publications.
- Bindu, P. & Thomas, I. (2006). Gender differences in Emotional Intelligence. *Psychological Studies*, 51(4), 261-268
- Daniel A. Newman, Dana L. Joseph, Carolyn MacCann (2010). Emotional Intelligence and Job Performance: The Importance of Emotion Regulation and Emotional Labor; Volume 3, Issue 2 Pages 159-164.

Acknowledgement: I gratefully acknowledge to my family and all my friends for providing me all facilities that were needed in the completion of this study. I am thankful from the bottom of my heart to all the railway employees for their cooperation and precious time they spared for this study.

A COMPARATIVE STUDY OF SUBJECTIVE WELL BEING OF YOUNG ADULTS OF SINGLE PARENT FAMILY AND DUAL PARENT FAMILY

Priyanka Behrani*

ABSTRACT

The objective of the present research was to study the subjective wellbeing of individuals of single parent family as compared to the individuals of dual parent family. In view of the contradictory results reported in this area it was hypothesized that the difference between individuals of single parenting and dual parenting family would not be significant on the dimensions of subjective wellbeing. Purposive sampling technique was used for data collection. The sample consisted of 193 individuals within the age group of 18 to 25 years, 96 from single parenting families and 97 from dual parenting families. Subjective well being inventory by Nagpal and Sell (1992) was used for the study. Through statistical analysis, it is seen that there are significant differences on subjective wellbeing between individuals of single parent and dual parent family on the three dimensions of the positive wellbeing and four dimensions of negative wellbeing.

Key Words: Subjective wellbeing, single parenting, dual parenting, positive wellbeing & negative wellbeing.

INTRODUCTION

Parenting is defined as the work or skill of parents in raising a child or children (Karen, 2009). The most ideal form of parenting is the one in which both the parents are involved. This is generally known as a complete parenting or a dual parenting, where a child gets utmost care and protection from parents. On the other hand parenting in which only a parent is involved is known as single parenting. Single parenting can be defined as a situation in which one of the two individuals, involved in the conception of the child is being responsible for the upbringing of the child (Henslin, 1985).

* Assistant Professor, Department of Psychology, M.S. University of Baroda

Parents are the closest and the most important people in any child's life. Loss of parents at an early age or even in the teenage can be a huge mental setback. Parental death can have serious effect on children, indeed in comparison with other form of family dissolution and disruption. Parental death has consistently been found to be the strongest stressor on children (Sandler, Reynolds, Kliever and Ramirez, 1992).

Children normally gains a sense of primary attachment and when sudden changes occurs it can be quite traumatic (Christine. 2000). The death of a parent can result in severe grief and even depression. According to the American Psychiatric Association, the loss of a relationship or a close attachment can cause a period of marked grief and emotional stress. This type of stress can affect a person's physical and emotional well being. It is not uncommon for the children to suffer from changes in mood, appetite and sleep. Experts note that a child who loses a parent at a younger age is at risk for depression, withdrawal, anxiety, conduct problems and lower self esteem (Christine, 2000). Experiencing the death of a parent is traumatic at any age, but it's particularly harrowing for young children (Harvey & Miller 1998).

With the death of a parent, young children are deprived not only of the guidance and love that the parent would have provided as the children grew up but also the sense of security that the parent's ongoing presence in the home would have bestowed. It's not at all unusual for the child to cling to the surviving parent because one of the two people the child counted on being with him and supporting him (in all aspects) until adulthood, is now gone.

Single parenting is a situation in which one of the two individuals (i.e., mother or father) involved in the conception of the child becomes solely responsible for the upbringing of the child. It could also come about as a result of divorce, separation of various kinds or death of anyone of the spouse, thus, leaving the responsibility of raising the children to the 'surviving' partner (Uchenna, 2013).

A single parent faces doubled responsibilities requiring time, attention and money of the parent. Hence, less attention is paid to the psychological well-being and education of the child. Children from single-parent homes are commonly described as more hostile, aggressive, anxious, fearful, hyperactive and distractible than children from intact families (Nwachukwu 1998).

Loss of Child's Role Model: A child derives some of his/her personality traits from his/her father and mother. Thirty to forty percent of the personality traits come from genes while the rest 60-70 percent are developed through modeling others. As it is known, mother is an important model for girls while father is an important role model for the boys. The loss of a child's role model affects the child's gender development. A boy who loses his father will take his mother as his role model, so he will have difficulty in his gender development (McLanahan & Sandefur 1994). Older children and adolescents deprived of a stable

source of affection react differently from younger children, but the effects on their personality is equally damaging. Loss of a parent, due to death or divorce causes a typical grief reaction, accompanied by feelings of insecurity and inferiority.

Subjective Well Being: Subjective well being can be defined as the individual's current evaluation of his/ her happiness. Such an evaluation is often expressed in affective terms, when asked about subjective well being participants will often say, "I feel good" (Schwartz & Strack, 1999). Subjective well being is thus, at least in part, a proxy for a global affective evaluation. Happiness has been associated with positive outcomes such as, increased sociability (Diener, et al, 1995) and creativity (Hirt, Melton, McDonald & Harackiewicz, 1996).

SWB consists of two distinctive components: an affective part, which refers to both the presence of positive affect (PA), and the absence of negative affect (NA), and a cognitive part. The affective part is a hedonic evaluation guided by emotions and feelings, while the cognitive part is an information-based appraisal of one's life for which people judge the extent to which their life so far measures up to their expectations and resembles their envisioned 'ideal' life (Diener, et al 1999). Psychologists have deeply studied the influence of personality on SWB, and found it to be the strongest and most dependable factor underlying differences in SWB between persons.

Significance of the Present Study: The study will assist teachers, counsellors, child psychologists and administrators to have a better understanding of the factors that affect children from single parent homes, so that they can better appreciate the behaviours and attitudes of the children they teach or counsel. This knowledge will put them in a good stead to help and add value to the life of these children. It is also hoped that the result of this study will help practitioners to develop appropriate counselling techniques and programmes which if implemented will decelerate the speed at which single-parenting is growing; seeing that single parenting does not lend itself to the balanced moral, emotional, physical, social and educational development of children of such background.

Objectives

To compare the effect of single parenting and dual parenting on the subjective well-being of young adults.

Hypothesis

There will be no significant difference between the individuals of single parenting and dual parenting family on the dimensions of subjective wellbeing.

METHOD

Design

A two independent group design was used to compare the effect of single parenting and dual parenting on the subjective well being of young adults.

Sample

Purposive sampling technique was used for data collection. The sample consisted of 193 individuals within the age group of 18 to 25 years, 96 from single parenting families (37 males and 59 females) and 97 from dual parenting families (32 males 65 females). Individuals were taken only from nuclear family while individuals staying with the grandparents or in joint family were excluded from the study. All the participants were selected from local vicinity and different institutes of Manipur. The years of the experience of the death/separation of the parent was set at a minimum of 5 years.

Tools

- 1 Subjective well being inventory (Nagpal and Sell, 1992): The inventory is designed to measure the feelings of well being and ill-being being experienced by an individual in various day to day life concerns . There are total 40 items measuring 11 different dimensions plus three inferred dimensions by combining scores, viz, General well being positive effect, Expectation achievement congruence, Confidence in coping, Transcendence, Family group support, Social support, Primary group concern, Inadequate mental mastery, Perceived ill- health, Deficiency in social contacts, General well being on life, Overall positive and Overall negative and Total.

Procedure

First of all the permission were sort from the respective authority of the colleges and institutes. With the help of the teachers and the students representatives of the college pre information was obtained about the students' socioeconomic background, age, family type, family income, place of stay, the living status of the parent i.e. whether both the parents are alive or not were taken. Then the students were selected based on the set criteria i.e. family income, family type and place of stay (whether they stay at home or in hostel). Individuals who met the set criteria were contacted and appointment was taken. The students were grouped as per their conveniences. The data were collected in the group of 6 to 7 each, together for the single as well as the dual parenting group. Doubts were clarified when needed during data collection.

RESULTS AND DISCUSSION

The variable of the study was the subjective well-being. Subjective wellbeing is the overall evaluation of a person's current happiness. An attempt was made to study if the death of a parent affect or contributes to the subjective wellbeing of the individuals and if there is difference in the subjective wellbeing of the individuals from single and dual parent families. For statistical analysis of the data descriptive statistics were computed (mean and standard deviation) and the

difference between the individuals of single parent and dual parent families on the dimensions of subjective wellbeing was tested statistically by means of t-test. The results are shown in Table 1 and 2.

Table1: Mean, Standard Deviations and t scores of positive dimensions of subjective well being.

<i>Variables</i>	<i>Single parenting Mean(SD)</i>	<i>Dual parenting Mean(SD)</i>	<i>df</i>	<i>t</i>	<i>Sig. (2 tailed)</i>
General well-Being	5.6250	7.1237	191	49.487	.000*
positive affect	(1.53039)	(1.07294)			
Expectation	5.8958	6.6289	191	10.972	.001*
achievement	(1.42518)	(1.12101)			
congruence					
Confidence in	6.4039	6.4639	191	.299	.585
coping	(1.42591)	(1.17315)			
Transcendence	6.1563	6.1340	191	.055	.814
	(1.12697)	(0.96424)			
Family group	8.3854	7.4536	191	32.074	.000*
support	(1.05001)	(1.17279)			
Social support	6.6563	6.4124	191	1.043	.308
	(1.34421)	(1.30506)			
Overall positive	39.1250	40.2165	191	2.159	.143
well being	(4.90381)	(3.36101)			

There is significant difference between individuals with single parenting and dual parenting on general well-being positive affect ($t(191) = 49.487, p > 0.01$) and the means indicates that the young adults of the dual parenting group score more than that of the single parenting group. Therefore the individuals from the dual parenting group reflect feeling of well-being arising out of an overall perception of life as functioning smoothly and joyfully. Similar findings were found by (Simons 1996) where it was found that children who are not raised by both of their biological parents often experience lower levels of well-being than those from intact families because they tend to lose social capital, referring to the emotional, economic and educational support that parents provide their children.

The second dimension i.e. Expectation-achievement congruence there is significant difference between the individuals from single parent and dual parent family ($t(191) = 10.972, p > 0.01$) and means indicate that the individuals from the dual parenting group score more on than the single parenting group. This means that the individuals from the single parenting family reflects less well being generated by achieving success and the standard of living as per one's expectation as compared to dual parent group. Similar findings were reported by Sokan and Akinade (1994) who stated that children from single parent homes exhibit lower

self-esteem, lower achievement motivation and lower academic achievement than those from intact homes, where both father and mother are present. This is in agreement with the study of Ham (2003) who established that students from intact families outperform students from divorced families across all categories.

There is no significant differences on the dimensions of Confidence in coping, Transcendence, Social support and overall positive wellbeing as the means of the two groups score do not differ statistically.

The fifth dimension, Family group support, was found to be significant ($t(191) = 32.074, p > 0.01$), however, surprisingly, the mean of the single parenting group was more than that of the dual parenting group. This indicates that the individuals from the single parenting group derive more positive feelings from their relationship with the parent, may be because they depend on the single parent for supportive, cohesive and emotional attachment and in the absence of the other parent, this relationship becomes more significant. Similar findings are also supported by Uchenna (2013). The reason for the difference in well-being is that children from intact homes regardless of sex, develop good personality and they hardly have any complex because, they are secure in the love of their parents.

Table 2: Mean, Standard Deviations and t scores of Negative dimensions of subjective wellbeing.

Variables	Single parenting Mean(SD)	Dual parenting Mean(SD)	df	t	Sig. (2 tailed)
General well-Being	6.8750	5.4330	191	50.156	.000
Negative affect	(1.45999)	(1.39871)			
Primary group concern	13.1240 (2.5321)	14.1321 (2.0124)	191	12.475	0.23
Inadequate mental mastery	14.1458 (2.54633)	13.0928 (2.08208)	191	11.471	.001
Perceived ill health	12.6164 (2.37788)	12.0825 (1.53887)	191	4.325	0.39
Deficiency in social contacts	7.4375 (1.46404)	5.3402 (1.57379)	191	95.051	.000
Overall negative well being	41.0729 (5.38271)	35.9458 (4.36217)	191	56.305	.000

On the negative well-being four dimensions were found to be significant. There is a significant differences between individuals from single parenting and the dual parenting family on the dimension of overall negative well-being i.e. ($t(191) = 50.156, p > 0.01$). The mean for the single parenting group is more than the dual parenting group. This means that the individuals from the single parenting group tend to have more negative well being than the dual parenting individuals. This finding is substantiated by Garnefski and Diekstra (1997) where it was found

that adolescents from one parent and step-parent families reported lower self-esteem, more symptoms of anxiety and loneliness, more depressed mood, more suicidal thoughts and more suicide attempts than children from intact families. However, some studies indicate that there are positive outcomes in single-parent families on mother-children relationships.

There is significant difference between individuals with single parenting and dual parenting on the dimension of Inadequate mental mastery ($t(191) = 11.471, p > 0.01$). This means that both the groups reflect different sense of insufficient control over or the inability to deal effectively with certain aspects of everyday life that are capable of disturbing the mental equilibrium. The mean for the single group is greater than that of the dual parenting group and hence they experience more inadequate mental mastery. Similar findings were found that those born to married parents had fewer socio-emotional and health problems as well as higher cognitive scores (Carlson & Corcoran, 2001; Bzostek & Beck, 2008; Harknett, 2005)

There is significant difference between individuals from single parenting family and dual parenting family on the dimension of Deficiency in social contact ($t(191) = 95.051, p > 0.01$). The mean for the single group is more than that of the dual parenting group. This indicates that the individuals from the single parenting group are overwhelmed with the feelings of being disliked or missing friends. Similar to this it is frequently believed that two biological parents provide a more favorable family environment for healthy child development and that family arrangements deviating from this structure, such as single-parent families or stepfamilies, are assumed to be problematic for children (Amato & Keith 1991; Kitson & Holmes 1992). Similarly Moore, et al. (2006) found that children living in single-parent and/or low-income households are more likely to exhibit problem behaviors and depressive symptoms and are less likely to display social competence than are children who grow up in more fortunate circumstances.

On the last dimension i.e. General well being negative affect there is significant difference between individuals from single parenting and dual parenting family ($t(191) = 56.305, p > 0.01$). The analysis shows that the mean for the single parenting group exceed that of the dual parenting group that means individuals with single parenting show more negative wellbeing than individuals with dual parenting. These results are supported by the findings of Ortese & Agbo (1997,1998) who reported that children raised in single parent homes when compared to their peers from traditional two parent homes are at risk for number of less desirable out comes and such outcomes lead to concurrent psychological and Behavioural difficulties. Another research parallel to this (Herwing, et al., 2004; Jackson, 2000) also found most common problems seen in single parent families children are depression, stress, loneliness, aggression, compliance, smoke, alcohol, narcotics.

On the dimensions of Primary group concern and Perceived ill health there is no significant difference between individuals with single parent and dual parent families.

Hence summarizing all the results of the subjective well being analysis, the hypothesis that there will be no significant difference between individual from single parenting family and the dual parenting family is disapproved on seven dimensions of Subjective well being that is General well- Being positive affect, Expectation achievement congruence, Family group support on positive dimensions and General well- being negative affect, Inadequate mental mastery, Deficiency in social contacts and Overall negative wellbeing. Therefore, it would not be false to say that the death of the parent affects the subjective wellbeing of the individuals. The negative effect is more than that of the positive effect and hence this research indicates that the death of a parent lowers the subjective wellbeing of the individuals.

REFERENCES

- Amato, P. R. & Bruce K. (1991). Separation from a parent during childhood and adult socio-economic attainment. *Social Forces*. 70.187-206.
- Bzostek, S., & Beck, A. (2008). Family structure and child health outcomes in fragile families. Center for Research on Child Wellbeing. Working Paper WP08-11-FF
- Carlson, M.J., & Corcoran, M.E. (2001). Family structure and children's behavioral and cognitive outcomes. *Journal of Marriage and Family*. 63,779-792.
- Christine, A. (2000). The relationship of age and subjective well-being: A test of Kozma's theoretical model. An unpublished master's dissertation submitted to The Graduate Faculty of the University of Akron. Retrieved on 02nd April, 2016 from, <http://www3.uakron.edu/witt/rmfcs/fruhauf.pdf>
- Demo, David H. & Martha J. (Cox. 2000). Families with Young Children: A Review of research in the 1990s. *Journal of Marriage and the Family*. 62.876-895.
- Diener, E., Smith, H. & Fujita, F. (1995). The Personality Structure of affect. *Journal of Personality and Social Psychology*. 69. 130-141.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*. 125. 276 -302.
- Garnefski, N., & Diekstra, R.F. (1997). Adolescents from one parent, step parent and intact families: emotional problems and suicide attempts. *Journal of Adolescents*. 20. 201-208
- Ham, B.D. (2003). The Effect of Divorce on the Academic Achievement of High School seniors. *Journal of Divorce and Remarriage*. 38.167-185.
- Harknett, K. (2005). Children's elevated risk of asthma in unmarried families: underlying structural and behavioral mechanisms. Center for Research on Child Wellbeing Working Paper 2005-01-FF
- Harvey JH, Miller E. (1998) Toward a psychology of loss. *Psychological Science*. 9.429-434.
- Henslin, J.M. (1985). *Down to earth sociology: an introductory readings*. New York: Macmillan.

- Hirt, E. R., Melton, R. J., McDonald, H. E., & Harackiewicz, J. M. (1996). Processing goals, task interest, and the mood-performance relationship: A mediational analysis. *Journal of Personality and Social Psychology*. 71. 245-261.
- Herwig, J. E., Wirtz, M., & Bengel, J. (2004). Depression, partnership, social support, and parenting: Interaction of maternal factors with behavioral problems of the child. *Journal of Affective Disorders*. 80. 199-208.
- Jackson, A.P. (2000). Maternal self-efficacy and children's influence on stress and parenting among single black mothers in poverty. *Journal of Family Issues*. 21, 3-16
- Karen, D. (2009) Parenting. Retrieved on 5 March 2013. From <http://www.karendelency.com/parenting/definition>
- Kitson, G. C. and William M. H. (1992). *Portrait of Divorce: Adjustment to Marital Breakdown*. New York: Guilford.
- Ortese, P.T. (1998). Single Parenting in Nigeria Counselling Concerns and Implications. *The Counsellor*. 16.61-66.
- McLanahan, S. and Sandefur, G. D. (1994). *Growing up with a single parent*. Cambridge, Mass.: Harvard University Press.
- Moore, K.A., Vandivere, S., & Redd, Z. (2006). A sociodemographic risk index. *Social Indicators Research*. 75. 45-81
- Nwachukwu, F.J (1998). Single-Parent Family: Emerging Family Pattern in Nigeria. *The Counsellor*. 16.137-146.
- Sandler, Reynolds, Klierer & Ramirez. (1992). Specificity of the relation between life events and psychological symptomatology. *Journal of Child Clinical psychology*. 21(3)
- Sokan, S.O & Akinade, E.A. (1994). *Development Psychology: A Basic Text for Colleges and Universities*, Ibadan: Caltop.
- Schwarz, N. (Ed); Strack, F. (1999). Kahneman, Daniel (Ed); 3.+Diener, Ed (Ed); Well-being: The foundations of hedonic psychology Reports of subjective well-being: Judgmental processes and their methodological implications. (pp. 61-84). New York, NY, US: Russell Sage Foundation. 12.593
- Schwarz, N. and Strack, F. (1999). Reports of Subjective Well-Being: Judgmental Processes and Their Methodological Implications. in D. Kahneman, E. Diener, and N. Schwarz, eds., *Wellbeing: The foundations of hedonic psychology*. New York: Russell Sage, 61-84
- Simons, Ronald L. (1996). Understanding differences between divorced and intact families. Thousand Oaks, CA: Sage Publications. Retrieved on 18 febraary 2017 from <http://crrw.princeton.edu/workingpapers/WP10-14-FF.pdf>
- Uchenna, A.(2013). Single-parenting, psychological well-being and academic performance of adolescents in Lagos, Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*. (JETERAPS). 4(1).112-117

STRESS ANXIETY AND DEPRESSION AMONG HIV/AIDS PATIENTS

Mohammad Amin Wani* and R. Sankar**

ABSTRACT

Since 1981, AIDS kills 39 million people globally. This silent killer disease not only affects the patient physiologically and economically but also psychologically too. It is found by various researchers that AIDS patients have lot of psychological problems like fear, stigma, distress, aggression, anxiety, stress, depression etc. In the present study the investigator aimed to assess the level of stress anxiety and depression among HIV/AIDS patients. The present study constituted sample of 100 HIV/AIDS patients with equal number of male and female, selected through simple random sampling method. Further all patients were equally divided into two more subgroups on the basis of their marital status (married and unmarried). Anxiety, Depression and Stress Scale (ADSS-BSPSA) constructed by Bhatnagar et al., were used for the assessment of anxiety, stress and depression among patients. For statistical analysis mean, t-test and Pearson correlation was applied by using SPSS 16.0 version. The results demonstrated that AIDS patients have high level of anxiety (14 % patients have moderate level, 59 % have severe level), stress (2 % patients have mild, 35% have moderate level, and 63 % have severe level) and depression (26% have moderate level, while as 74 % have severe level) respectively. Further, results also uncovered that female and married patients have high level of anxiety, stress and depression than male and unmarried patients. To sum up, on the basis of our results we conclude that most of the AIDS patients have moderate and severe level of anxiety, stress and depression.

Key Words: HIV, AIDS, CD4, Anxiety, Stress, Depression

INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) is a viral disease caused by Human Immunodeficiency Virus (HIV), previously known as lymphadenopathy

* Research scholar in Psychology Annamalai University Tamil Nadu India

** Assistant Professor Department of Psychology Annamalai University Tamil Nadu

associated virus (LAV) or human T-cell lymphotropic virus 3 (HTLV-III), found in the infected person's body fluids via semen and vaginal fluids, cerebrospinal fluid, plasma and biopsy specimens from brain and rectum, blood and breast milk. HIV is a retrovirus because of the presence of the enzyme reverse transcriptase, which converts the viral RNA to DNA which then becomes integrated into the genome of the human host cells.

Human Immunodeficiency Virus is transmitted through unprotected oral, vaginal, or anal sex, blood transmission, sharing infected needles, and through breast feeding. HIV attacks the white blood cells known as CD4 or T-helper cells of the immune system, these cells play a vital role as they produce portions to fight against the infection and protect the body from infections, illness etc. HIV minimizes the functions of CD4 cells, which result the immune system weakened and the body fails to fight infection. If CD4 cells drop below 200 cells/ μ l HIV status will change from HIV positive to AIDS. Researchers believed that AIDS is not the direct cause of death but because of failure of proper function of immune system an individual is attacked by various diseases like Kaposi's sarcoma (KS), *Pneumocystis Carinial* Pneumonia (PCP), and Cytomegalovirus (CMV), which are enough to kill the patient Bennett, (2011).

AIDS was firstly clinical reorganized in 1981 in USA, when the Center for Disease Control noticed Kaposi's sarcoma and *Pneumocystis Carinial* Pneumonia were being found in a group of patients hitherto virtually free of these diseases Wisdom, (1989).

Since 1986 when Suniti Solmon diagnosis the first case of HIV amongst female sex workers in Chennai Tamil Nadu 20, 88,638 people are living with HIV/ AIDS and 1, 47,729 people died by this deaths till March 2014. While as in Jammu and Kashmir state 5,810 (0.08%) people have AIDS and 146 AIDS deaths have taken place NACO (2014).

AIDS patient have severe fatigue, chronic fever, chronic diarrhea, continuously weight loss, skin rashes in private parts, bruising or bleeding, shortness of breath. Besides it they have also various neurological as psychological problems like, acute fear, stigma, guilt, grief, distress, aggression, hopelessness, anxiety, stress, depression even suicidal ideation, tendencies and attempts Sheridan & Radmacher, (1992).

Researchers found that people living with HIV/AIDS have various psychological problems like anxiety, stress, depression, suicidal ideation, loneliness, hopelessness, etc. Stress is commonly found among the people living with AIDS, because of poor physical health, continuous decline of CD4 cells, continuous illnesses and lower quality of life. Martinez *et al.*, (2004), Botha (1996) found high rates of stress among HIV/ AIDS patients than general population.

Anxiety is a useful emotion without it, people are likely to be reckless and engage in activities that could lead to harm or even death. However, when levels

of anxiety turn out to be improperly high, they stop being a proportionate response to the threats within the environment and become problematic to the individual experiencing them Bennett, (2011). People with HIV have high level of anxiety Amsalu Gashaw, Minale, Tigabu & Telake (2014). Anxiety is common among AIDS patients; it negatively affects the patient's psychological well-being, results grief, guilty, hopeless, helplessness, loneliness etc. They have the anxiety about death, loss of job etc.

Depression is one of the most prevalent and least diagnosed psychological problems found AIDS patients. It is most common psychological symptoms found among people living with AIDS. Depression has negative impact on individual's quality of life Ammassari, et.al., (2014). Depressed people have emotional, motivational, psychological, cognitive and sociological problems. They are unmotivated, lazy, negative thinkers and have no control on their emotions Bennett, (2011). People with depression are confused, have slow thoughts, poor interpersonal relationships and difficulties in retaining information or solving problem. There is currently an enormous amount of research into AIDS being undertaken which highlights various psychological problems (like fear, stigma, guilty, hopelessness, anxiety, stress, depression, suicidal ideation etc.) commonly found among people with HIV/AIDS. Sreelekshmi (2015), highlighted that fear of stigma and anxiety is commonly found among HIV/AIDS patients. She found that 42.68% patients have anxiety levels. Results also showed significantly negatively correlated between anxiety and acceptance coping strategy. Shukla Agarwal, Singh, & Srivastava (2011), affirmed that 165 (92.1%) HIV/AIDS patients have mild, 9 (5.0%) have mild to moderate and 5 (2.7%) have moderate to severe level of anxiety respectively. Simultaneously Shane *et al.*, (2011) also found 62.3% patients have depression and 82.3% have anxiety. While Sewell *et al.*, (2000) highlighted that 70.3 % AIDS patients have high level of anxiety. Chandalia & Patoliya (2015) investigated that female and elderly HIV/AIDS patients have high level of anxiety than male and young patients. Saadat Behboodi & Saadat (2015) also found women have higher levels of depression and anxiety than men simultaneously men have higher stress than women. However, Belete, Andaregie, Tareke, Birhan & Azale (2014) highlights that patients recently diagnosed by HIV have high level of anxiety. On the other hand Hintze *et al.*, (1993) reported that HIV patients have higher levels of death anxiety and death depression. While as Chandra, Ravi, Desai & Subbakrishna (1998) confirmed that 30% HIV patients have anxiety and 40% are depressed. Imasiku, M., L. (2008) revealed that HIV/AIDS patients have higher anxiety level. Results show that there is positive correlated between anxiety and physical illness behavior. Baer *et al.*, (1998) concluded that people with HIV experience high level of anxiety, fear, distress, depression, suicidal ideation and guilt. Olley Seedat, & Stein (2006) also found stress related disorders among AIDS patients. Crandall & Coleman (1992) also

concluded that people with AIDS often experiences stress related symptoms. Wei *et al.*, (2014) reported that due to severe psychological stress 40.1 % of AIDS patients thought about taking requital on different people or society. Onyebueke & Okwaraji (2015) highlighted that HIV patients have high depression level and suicide risk. Pedro, Guynn & Matorin (2000) in their study found that 20-35% HIV/AIDS patients have depression. Bhatia & Munjal (2014) highlighted that patients under ART have high level of depression, Findings shows that out of 160 patients 94 (58.75%) patients was depressed. While as Reis *et al.*, (2011) found mild, moderate and severe depression symptoms among 63 (27.6%) AIDS patients. Results also show that female patients have more severe symptoms of depression than male patients. Kaneez (2016) also reported that female HIV/AIDS have slightly higher level of depression than male patients. However, Barua *et al.*, (2011) researched that female HIV/AIDS patients are more depressed than male patients. Mello, Segurado & Malbergier, (2010) also reported that female patients are more depressed than male; also patients under ART have severe depression. While as researchers like Gupta & Ila (2010) found male AIDS patients have more depression than females patients. Simultaneously Mohammed *et al.*, (2015) also found male HIV patients are more likely to develop depression than female patients.

Objectives

1. To assess the level of anxiety, stress and depression among HIV/AIDS patients.
2. To find out the level of anxiety, stress and depression on the basis of gender and marital status.
3. To find out the relationship between gender, anxiety, stress and depression.
4. To find out the relationship between marital status, anxiety, stress and depression.

Hypotheses

- H₁. There would be significant difference found between the mean scores of anxiety, stress and depression of male and female AIDS patients.
- H₂. There would be significant difference found between the mean scores of anxiety, stress and depression of married and unmarried AIDS patients.
- H₃. Gender would be significantly correlated with anxiety, stress and depression.
- H₄. Marital status would be significantly correlated with anxiety, stress and depression.

METHOD

Sample

The present study was conducted on a sample of 100 HIV/AIDS patients divided into two equal groups on the basis of gender (50 males and 50 females). Further these two groups were equally subdivided into two more groups (married and unmarried) with 25 patients in each group. Simple random sampling method was used for the selection of sample. Only those AIDS patients who came under the following criteria were selected in the study

Inclusion Criteria

- Patients' hails from Kashmir valley.
- 20-40 years old patients.
- Male and female patients.
- Married and unmarried patients.
- Patients registered in ART center Srinagar.

Exclusion Criteria

- CD4 Count was excluded.
- Education level of the patient was not taken.
- History of previous psychological as well as physiological illness.
- Family type of patients was excluded.
- Economic status was also exclusion criteria.

Tools

Anxiety, Depression and Stress Scale (ADSS-BSPSA) constructed and standardized by Pallavi Bhatnagar, Megha Singh, Manoj Pandey, Sandhya and Amitabh was used for the measurement of anxiety, stress and depression among patients. The scale consists of 48 items divided into 3 subscales (Anxiety, Depression and Stress scale consists of 19, 15 and 14 items respectively). The responses of the items are in 'Yes' and 'No' form and are scored as '1' and '0' respectively. Reliability of the scale is found through Cronbach's Alpha and Spearman Brown coefficient methods and was found 0.81 and 0.89 respectively. While as the reliability of anxiety, depression and stress scales was found 0.76, 0.75 and 0.61 through Cronbach's Alpha method and through Spearman Brown coefficient method it was found 0.86, 0.86 and 0.76 respectively.

Procedure

The study is conducted in Srinagar city of Jammu and Kashmir State consisted sample of 100 HIV/AIDS patients, from ART center Sher-I-Kashmir Institute of Medical Sciences (SKIMS) Srinagar. Prior to administrating the questionnaires on patients, the investigator gets the permission from concerned authority; information about the patients was also received from the doctor in

charge at ART centre. While meeting the patients proper rapport was established and they were told the purpose of meeting. After that Anxiety, Depression and Stress Scale (ADSS-BSPSA) was given to the patient and was asked to read all the instructions carefully before submitting their response. The investigator helps illiterate patients during submitting the responses by making them proper understanding of the statement. After 10-20 minute the patient handover the questionnaire to the investigator and were thanked for their cooperation. In this way the data was collect, and then obtained data was arranged in tabular form, than systematically analyzed by applying Mean, t-test and Pearson Correlation by SPSS 16.0 version.

RESULTS

The main findings of the present study are shown in tables; mean scores are also represented graphically.

Table No 1: Percentage of Anxiety, Stress and Depression of HIV/AIDS Patients

Area	Normal	Mild	Moderate	Severe
Anxiety	-	-	41%	59%
Stress	-	2%	35%	63%
Depression	-	-	26%	74%

Table No 2: Percentage of Anxiety, Stress and Depression of male and female HIV/AIDS Patients

Area	Gender	Normal	Mild	Moderate	Severe
Anxiety	Male	-	-	60%	40%
	Female	-	-	22%	78%
Stress	Male	-	4%	52%	44%
	Female	-	-	18%	82%
Depression	Male	-	-	48%	52%
	Female	-	-	4%	96%

Table No 3: Percentage of Anxiety, Stress and Depression of married and unmarried HIV/AIDS Patients

Area	Marital Status	Normal	Mild	Moderate	Severe
Anxiety	Married	-	-	14%	86%
	Un Married	-	-	68%	32%
Stress	Married	-	-	30%	70%
	Un Married	-	-	44%	56%
Depression	Married	-	-	14%	86%
	Un Married	-	-	40%	60%

Table No 4: Mean, S.D, SED, and t- value of Anxiety, Stress & Depression scores of male and female HIV/AIDS patients

Area	Gender	No	Mean	Std. Deviation	Std. Error Mean	df	t-value
Anxiety	Female	50	11.20	2.36	.33	98	5.44**
	Male	50	9.00	1.60	.22		
Stress	Female	50	10.72	1.07	.15	98	5.41**
	Male	50	9.30	1.51	.21		
Depression	Female	50	11.32	1.28	.18	98	6.33**
	Male	50	9.80	1.10	.15		

** Significant at 0.01 level

Table No 5: Mean, S.D, SED, and t- value of Anxiety, Stress & Depression scores of married and unmarried HIV/AIDS patients

Area	Marital Status	No	Mean	Std. Deviation	Std. Error Mean	df	t-value
Anxiety	Married	50	11.42	2.17	.31	98	7.07**
	Un Married	50	8.78	1.52	.22		
Stress	Married	50	10.36	1.26	.18	98	2.41*
	Un Married	50	9.66	1.62	.22		
Depression	Married	50	10.96	1.32	.18	98	2.93**
	Un Married	50	10.16	1.40	.19		

* Significant at 0.05 level, ** Significant at 0.01 level

Table 6: Correlation between Gender, Anxiety, Stress, and Depression

	Gender	Anxiety	Stress	Depression
Gender	1	-.482**	-.480**	-.539**
Anxiety	-.482**	1	.168	.147
Stress	-.480**	.168	1	.338**
Depression	-.539**	.147	.338**	1

** Correlation is significant at the 0.01 level (2-tailed).

Table 7: Correlation Marital Status, Anxiety, Stress, and Depression

	Marital Status	Anxiety	Stress	Depression
Marital Status	1	-.578**	-.237*	-.284**
Anxiety	-.578**	1	.168	.147
Stress	-.237*	.168	1	.338**
Depression	-.284**	.147	.338**	1

** Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Journal of Indian Health Psychology

DISCUSSION

The results of the present study demonstrated that most of the HIV/AIDS patients have severe level of anxiety stress, and depression. Out of 100 patients 41 % have moderate and 59 % have severe level of anxiety, while 2% patients have mild, 35 % have moderate, 63 % have severe level of stress, also 26 % patients have moderate and 74 % have severe level of depression respectively. Pedro *et al.*, (2000) also found the same results in their researches.

Considering the results on the basis of gender it was found that male patients have high moderate level of anxiety, stress and depression than female patients, while as female patients have high severe levels of anxiety, stress and depression than male patients. Results shows that 30 (60%) male patients have moderate and 20 (40%) have severe of anxiety; however 11 (22%) female patients have moderate and 39 (78%) have severe level of anxiety. It was also found that 2 (4%) male patients have mild, 26 (52%) have moderate and 22 (44%) have severe level of stress; while 9 (18%) female patients have moderate level and 22 (82%) have severe level of stress. Findings also indicates that 24 (48%) male patients have moderate and 26 (52%) have severe level of depression, simultaneously 2 (4%) female patients have moderate and 48 (96%) have severe level of depression respectively. These findings are supported by Amsalu *et al.*, (2014) and Deshmukh *et al.*, (2013).

Further findings divulge that married patients have high severe level of anxiety, stress and depression than unmarried patients while as unmarried patients have very high moderate levels of anxiety, stress and depression than married patients. Results indicates that 7 (14%) married patients have moderate and 43 (86%) have severe of anxiety, while as 34 (68%) unmarried patients have moderate and 16 (32%) have severe level of anxiety. Results also showed that 15 (30%) married patients have moderate and 35 (70%) have severe level of stress; however 22 (44%) unmarried patients have moderate level and 28 (56%) have severe level of stress. Findings also indicates that only 7 (14%) married patients have moderate and 43 (86%) have severe level of depression, simultaneously 20 (40%) unmarried patients have moderate and 30 (60%) have severe level of depression respectively.

Findings proved that female patients have high levels of anxiety, stress, and depression than male patients. The obtained mean scores of female patients in all three areas are more than male patients. The mean, S.D, SED of female group was found [anxiety (M = 11.20, S.D = 2.36, SED = .33), (stress M= 10.72, S.D = 1.07, SED = .15) and (depression M = 11.32, S.D = 1.28, SED = .18)]. Respectively the mean, S.D, SED of male group was found [anxiety (M = 9, S.D = 1.60, SED = .22), (stress M= 9.30, S.D = 1.51, SED = .21) and (depression M = 9.80, S.D = 1.10, SED = .15)]. The obtained t-value's of anxiety, stress and depression was found (5.44), (5.41) and (6.33) respectively with df 98, all these values are more than tabulation value at 0.01 level of significance, hence

our first hypothesis is accepted, Therefore we can say there is significant difference found between the mean scores of anxiety, stress and depression of male and female patients. Our findings are supported by Chandalia & Patoliya (2015), Saadat *et al.*, (2015), Barua *et al.*, (2013) and Gupta & Ila (2010).

Results also confirmed that there is significant difference between the mean scores of anxiety, stress and depression of married and unmarried patients, as obtained t-value's of all three area [(anxiety= 7.07), (stress = 2.14) and (depression =2.93)] are found significant at 0.05 level in t-table. Therefore our second hypothesis is also accepted. The mean, S.D, SED of anxiety, stress and depression scores of married patients was found [anxiety (M = 11.42, S.D = 2.17, SED = .31), (stress M= 10.36, S.D = 1.26, SED = .18) and (depression M = 10.96, S.D = 1.32, SED = .18)]. However the mean, S.D, SED of unmarried patients was found [anxiety (M = 8.78, S.D = 1.52, SED = .22), (stress M= 9.66, S.D = 1.62, SED = .22) and (depression M = 10.16, S.D = 1.40, SED = .19)] respectively.

Results also found that gender and marital status are negatively significant correlated with anxiety, stress and depression. The correlation of gender with anxiety, stress and depression was found (- .482, - .480, and - .539). Also correlation of marital status with anxiety, stress and depression was found (- .578, - .237 and - .284) respectively. Therefore on the basis of these findings our 3rd and 4th hypotheses are partially accepted.

CONCLUSION

The present study affirmed that female and married patient's are more inclined to anxiety, stress and depression than male and unmarried patients. It is also found that gender and marital status are negatively significant correlated with anxiety, stress and depression. On the basis of these findings it may be concluded that AIDS patients faced lot of psychological problems throughout the life. In this silent killer disease, where medical treatment is essentially ineffective, the psychological support is essential for this target group. In this illness individual as well as family counselling should be given priority, also adequate psychological and emotional support should be made available for these patients. Social as well as family support should be provided them so they can't feel lonely. Besides government, NGO's, psychologists, social workers and mental health professionals should come forward to help this target group. However, if government and policy makers make some legitimate plans for those patients, who are not bolstered by their families, they can't feel alone and can live a better life.

REFERENCES

- Ammassari, A., Antinori, A., Aloisi, M. S., Trotta, M. P., Murri, R., Bartoli, L., & Starace, F. (2004). Depressive symptoms, neuro-cognitive impairment, and adherence to highly active antiretroviral therapy among HIV infected persons. *Psychosomatics*, 45(5), 394-402.

- Amsalu B., Gashaw A., Minale T., Tigabu B., & Telake A. (2014). Prevalence of anxiety and associated factors among people living with HIV/AIDS at Debreabor general hospital antiretroviral clinic Debreabor, Amhara, Ethiopia, 2014. *American Journal of Psychiatry and Neuroscience*, 2(6), 109-114.
- Baer, J., W., Dwyer, P., C., & Lewitter, K., S. (1988). Knowledge about AIDS among psychiatric inpatients. *Psychiatric Services*, 39(9), 986-988.
- Barua, A., Sharma, Y., Basilio, M., A. (2013). Burning Issue of HIV/AIDS: A Psychosocial Study. *International Journal of Collaborative Research on Internal Medicine & Public Health*, 5(7), 545-551.
- Belete, A., Andaregie, G., Tareke, M., Birhan T, Azale T. (2014). Prevalence of anxiety and associated factors among people living HIV/AIDS at debretabor general hospital anti retro viral clinic Debreabor, Amhara, Ethiopia, 2014. *American Journal of Psychiatry and Neuroscience*, 2(6), 109-114.
- Bennett, P. (2011). Abnormal and clinical psychology an introductory text book 3rd Edition, McGraw Open University Press Two Penn Plaza, New York USA.
- Bhatia, M., S., & Munjal, S. (2014). Prevalence of depression in people living with HIV/AIDS undergoing ART and factors associated with it. *Journal of Clinical and Diagnostic Research*, 8 (10), 1-4.
- Botha, K., F. (1996). Post traumatic stress disorder and illness behaviour in HIV positive patients. *Psychological Reports*, 79(3), 843-845.
- Chandalia, T., A., & Patoliya, H., M. (2015). Anxiety among AIDS patients: The role of age, gender and residence. *The International Journal of Indian Psychology*, 3 (Special Issue), 143-150.
- Chandra, S., P., Ravi, V., Desai, A., & Subbakrishna, K., D. (1998). Anxiety and depression among HIV infected heterosexuals: A report from India. *Journal of psychosomatic research*, 45(5), 401-409.
- Crandall, C., S., Coleman, R. (1992). AIDS related stigmatization and the disruption of social relationships. *Journal of Social and Personal Relationships*, 9, 163-177.
- Deshmukh, N., Deshmukh, J., S., Borkar, A., M., & Khamgaonkar, M., B. (2013). Depression in People living with HIV/AIDS: A Prevalence study in Anti-Retroviral Therapy Centre. *Journal of Academia and Industrial Research*, 2(5), 262-264.
- Gupta, A., S., & Ila (2010). Impact of counselling upon anxiety and depression of AIDS patients. *Journal of the Indian Academy of Applied Psychology*, 36(2), 249-253.
- Hintze, J, Templer, D., I., Cappelletty, G. G, & Frederick, W. (1993). Death depression and death anxiety in HIV infected males. *Death Studies*, 17(4), 333-341.
- Imasiku, M., L. (2008). A comparative study of anxiety among HIV seropositive individuals, cancer patients and individuals from the normative population. *Medical Journal of Zambia*, 35(2), 39-47.
- Kaneez, S. (2016). Depression and coping mechanism among HIV/AIDS patients under anti retroviral therapy. *Indian Journal of Social Psychiatry*, 32(32), 149-153.
- Martinez, A., Israelski, D., Walker, C., & Koopman, C. (2004). Posttraumatic Stress Disorder in Women Attending Human Immunodeficiency Virus Outpatient Clinics. *AIDS Patient Care and STDs*, 16(6), 283-291.
- Mello, V., A., Segurado, A., A., & Malbergier, A. (2010). Depression in women living with HIV: Clinical and Psychosocial correlates. *Archives of Women's Mental Health*, 13(3), 193-199.

- Mohammed, M., Mengistie, B., Dessie, Y., & Godana, W. (2015). Prevalence of depression and associated factors among HIV patients seeking treatments in ART clinics at Harar Town, Eastern Ethiopia. *Journal of AIDS and Clinical Research*, 6(6), 474.
- NACO (2014). AIDS state fact sheets 2013-2014.
- Olley, B., O., Seedat, S., & Stein, D., J. (2006). Persistence of psychiatric disorders in a cohort of HIV/AIDS patients in South Africa: A 6 month follow-up study. *Journal of Psychosomatic Research*, 1(4), 479-484.
- Onyebucke, G. C., & Okwaraji, F. (2015). Depression and suicide risk among HIV positive individuals attending an outpatient HIV/ AIDS clinic of a Nigerian tertiary health institution. *Journal of Psychiatry*, 18(1), 1-8.
- Pedro, R., Guynn, R., W., & Matorin, A., A. (2000). Psychiatric considerations in the diagnosis, treatment and prevention of HIV/AIDS. *Journal of Psychiatric Practice*, 6(3), 129-139.
- Reis, K., R., Haas, V., J., Santos, C., B., Teles, S., A., Galvao, M., T., G., & Gir, E. (2011). Symptoms of depression and quality of life of people living with HIV/AIDS. *Revista Latino Americana de Enfermagem*, 19(4), 874-881.
- Saadat, M., Behboodi, Z., M., & Saadat, E. (2015). Comparison of depression, anxiety, stress, and related factors among women and men with human immunodeficiency virus infection. *Journal of Human Reproductive Sciences*, 8(1), 48-51.
- Sewell, C., M., Goggin, J., K., Rabkin, G., J., Ferrando, J., S., McElhiney, C., M. & Evans (2000). Anxiety syndromes and symptoms among men with AIDS. *Psychosomatic*, 41(4) 294-300.
- Shane, D., M., Vilson, H., B., Clea, S., Valbona, H., G., Lars, O., Yvonne, M., & Arjan, H. (2011). Levels of self-reported depression and anxiety among HIV-positive patients in Albania: a cross-sectional study. *Croat Medical Journal*, 52(5), 622-627.
- Shanthi, A., G., Damodharan, J., & Priya, G. (2007). Depression and coping: A study on HIV positive men and women. *Sri Ramachandra Journal of Medicine*, 15-19.
- Sheridan, C., L., & Radmacher, S., A. (1992) Health psychology challenging the biomedical model. John Wiley & Sons, Inc New York USA.
- Shukla, M., Agarwal, M., Singh, J., V., & Srivastava, A., K. (2016). Anxiety among people living with HIV/AIDS on antiretroviral treatment attending tertiary care hospitals in Lucknow, Uttar Pradesh, India. *International Journal of Research in Medical Sciences*, 4 (7), 2897-2901.
- Sreelekshmi, R. (2015). Anxiety and coping mechanisms among HIV positive patients. *Manipal Journal of Nursing and Health Sciences*, 1(2), 91-95.
- Wei, S., Ming, W., Peng, Q., Chunming, L., Lie, W. (2014). Psychological well-being of people living with HIV/AIDS under the new epidemic characteristics in China and the risk factors: a population-based study, *International Journal of Infectious Diseases*, 28, 147-152.
- Wisdom, A. (1989). A color atlas of sexually transmitted diseases. Wolfe medical publication Ltd. London England.

IMPACT OF ATTITUDE AND EMOTIONAL INTELLIGENCE ON QUALITY OF LIFE OF MENOPAUSAL WOMEN: A REVIEW

Seema Vijayvargiya* & Bhupinder Singh**

ABSTRACT

Menopause is a normal life process occurring in the life span of women. It is a physiological change and not an illness. During the period of menopause, women experiences mainly symptoms like hot flushes, night sweats, insomnia, palpitations, mood disturbance, fatigue, vaginal dryness, irritability, etc. The present article discusses the experiences of women regarding menopause and has been observed through researches that biological and psychological changes become vulnerable with women experiencing menopause and thus impair their quality of life. Studies have also evidenced that women with high emotional intelligence have positive attitude towards menopause and experience less stress and menopausal symptoms. To fulfil all the demands of life and due to her hectic scheduled activities creates lot of stress, frustration, anxiety and depression and hormonal changes which in turn affects her quality of life during this mid -life period. Focus on such studies will help the psychologists, health workers, counsellors and the policy makers to strengthen the quality of life of women during menopause.

Key Words: Menopause, Attitude, Emotional Intelligence, Quality of Life.

INTRODUCTION

In the fast-changing lifestyle and a positive move towards 21st century women have progressed in all fields', and are moving ahead to attain all the needful goals of their life. But with this we cannot ignore the natural physiological changes which also have an impact on the psychology of women. Women do many conflicting roles, such as mother, spouse, daughter-in-law at house and a productive employee at work place. Due to the uniqueness of the female anatomy

* Department of Psychology, Barkatullah University, Bhopal.

** Department of Psychology, Barkatullah University, Bhopal.

and its design to have children, women often have special health needs. This leads to certain diseases and health conditions which are unique in females and are prominent at different phases of their life. Basically she passes through four phases in her life, — the adolescence, the childbearing years, the mid-life and the senior adulthood. Menopause makes its entry during mid-life stage.

Menopause

Menopause is not a disease, but it is a point in women's life at which she is no longer fertile with the cessation of her menstrual periods. It is a part of the natural ageing process for women, which refers to the point in time when menstruation has stopped for 12 consecutive months. This occurs naturally during the midlife stage between the age of 45 and 55 years. The period before the menopause (peri-menopause) leads to menstrual irregularities (irregularity of the length of the period, the duration between periods and the consistency of flow). According to the studies by Fisher (1994) and Ussher (1998), women having entanglement for working life include hot flushes (sudden increases in body temperature), palpitations, night sweats and sleep interruption, exhaustion, poor concentration, irritability, mood disturbance, skin irritation and dryness during the period of menopause. Some of these symptoms may continue for some time after the menopause (post-menopause) also. This period of hormonal change and associated symptoms can last from four to eight years. More menopause symptoms like vaginal dryness, reduced libido, headaches, foggy thinking, as well as weight gain, joint distress, forgetfulness, urinary infection, itchy skin, sexual dysfunction and bowel upset were reported by Morse, et al. (1994) and also found that some of the peri-menopausal women showed symptoms of anxiety, depression and irritability.

Considerable variation was reported in women's experience of menopause symptoms with 25% of western women reporting strong symptoms and 50% reporting mild to moderate symptoms. Some women experiencing an intense sense of loss at menopause (e.g. loss of maternal role, youth or beauty) which may lead them to feel that life has lost its purpose (Glazer, et al. 2002).

WHO (1996) has defined different menopause-related terminologies, which are as follows:

- i. **Natural Menopause:** The permanent cessation of menstruation resulting from the loss of ovarian follicular activity occurring after 12 consecutive months of amenorrhea, without any obvious pathological or physiological cause. There is no adequate independent biological marker for the event.
- ii. **Perimenopause:** The time immediately before menopause (when the endocrinological, biological, and clinical features of approaching menopause commence) and the first year after menopause.

- iii. **Menopausal Transition:** The period of time before the Final Menstrual Period (FMP) when variability in the menstrual cycle is usually increased.
- iv. **Pre-menopause:** The whole of the reproductive period up to the FMP.
- v. **Induced Menopause:** The cessation of menstruation which follows either surgical removal of both ovaries (with or without a hysterectomy) or iatrogenic ablation of ovarian function (e.g., by chemotherapy or radiation).
- vi. **Post Menopause:** Time from the FMP, regardless of whether the menopause was induced or spontaneous.
- vii. **Premature Menopause:** It is that which occurs at an age less than two standard deviations below the mean estimated for the reference population. In practice, in the absence of reliable estimates of the distribution of age at natural menopause in populations in developing countries, the age of 40 years is frequently used as an arbitrary cut-off point, below which menopause is said to be premature.
- viii. **The Climacteric** (which includes the menopause transition as well as the unspecified period after the FMP), are internationally popular but have been employed primarily outside the United States.

The physiological and socio-psychological problems related to menopause have a positive correlation between them (Nagar, 1997). Women also reported backache, increased headache, sadness, impatience, nervousness, sleep problems and other symptoms during menopause. Studies by Krishna & Shah(2004), reflect that peri-menopausal symptoms considerably vary region wise. It was seen that symptoms like shoulder stiffness, hand joint pain, backache, tiredness and headache were dominant in South-East Asian countries. Menopause, thus, affects the quality of life due to various symptoms inducing stress where social support and attitude also play their role.

Attitude

An attitude is an expression of liking or disliking toward a person, place, thing, or event (the attitude object). According to Gordon Allport, "Attitude is the most distinctive and indispensable concept in contemporary Social Psychology". Attitudes, perceptions or conceptuality and expectations or hope, these three things are the part of psychosocial phenomena which surrounds menopause. Women's attitude to menopause may also have its effect on the occurrence of menopause. Women who held negative thoughts earlier to menopause were more likely to experience depression (Hunter, 2002) and experience worse menopause symptoms (Bowles, 1986). Recently psycho-education intermediation, encouraging a positive attitude to menopause was found to associate with less severe menopause symptoms and psychological distress

(Rotem, Kushnir, Levine, & Ehrenfeld, 2005). Some studies have evaluated the relationship between stress, coping and menopause symptoms.

Study of Igarashi, et al.(2000) reflected that menopausal women who went under treatment used more avoidance coping than fit menopausal women; and high avoidance and low aggressive-expression coping were found to be mutually related with menopause symptom severity. However, it is found that trouble-focused coping is thought to intervene between your usual mood (e.g. optimism) and menopausal health (Caltabiano & Holzheimer, 1999). Studies have assessed the relationships between stress, psychological distress (i.e. anxiety, depression) and menopause symptoms. Social support is a correlate of menopause symptoms and physical and psychological well-being in women, which was studied by Lachman(2004)and Bresnahan & Murray-Johnson(2002). Low social support and distressing relationships seem to lead to stress and illness, studied by Lachman(2004). With attitude, emotional intelligence of a woman also has its own value as both are inter-related.

Emotional Intelligence

"Emotional intelligence is the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth," (Mayer & Salovey, 1997). Emotional intelligence (EI) is linked to a variety of health outcomes and emotional well-being, particularly to the levels of perceived stress, anxiety and depression (Brown & Schutte, 2006). Studies of Schutte, et al.(2001) have shown emotional intelligence to be associated with the maintenance of better social and interpersonal relationships. Low social support may mediate between EI and worse menopause symptom although it has not been evaluated before. But it was found that there was direct and indirect relationships between stress, anxiety, depression, social support, coping, emotional intelligence, attitude towards menopause, severity of menopause symptom and physical health in middle-aged women.

Quality of Life

Healthy life characteristics are the essence of health-related quality of life. The theoretical basis of health-related quality of life is based on a several dimensions' aspect of health stemming from the World Health Organization (1948) definition of health which says that health is a state of overall physical, mental, and social well-being and not merely the absence of illness or infirmity. According to Patrick & Erickson (1993), health-related quality of life is defined "as the value assigned to duration of life as adapted by impairments, functional states, perceptions, and social opportunities that are effected by illness, injury, treatment, or policy." Or in other words we can say that quality of life is the subjective judgement of the extent to which a person is living a good life, which may be

based on feelings of happiness, meaning in life, and inner peace. The menopausal transition has adverse or positive effects on symptoms, functioning, health perceptions, and repercussion or the capacity to react to stress.

Some of the physiological changes such as osteopenia, osteoporosis, and urogenital atrophy associated with menopause have been found to be significantly related with higher stress levels, increased anxiety, and thus resulting in a negative effect on the quality of life, (Lewis 2009 ; Utian 2005). Thus, quality of life has become an important outcome in health-related studies and menopause as it is being seen stressful with assumption to impair the quality of life of a woman (Avis, et al., 2009). Menopause research has gained attention in recent years, about how the stress of menopause and use of coping strategies impact women's quality of life (Col, Haskins, & Ewan-Whyte, 2009). An understanding of coping is essential to understand stress and its physical and psychological effects (Skinner, Edge, Altman, & Sherwood, 2003). Studies done on diverse population by Avis, et al. (2003) on peri-menopausal women report greater bodily pain and role restrictions due to physical health or emotional difficulties, poorer perceived health, and more physical or somatic symptoms than do premenopausal women.

Studies by Kuh, Wadsworth, & Hardy (1997) and Li, et al. (2002) suggest that women who choose to use HT during menopause have poor health-related quality of life. Women who report high levels of anxiety, depression, and other emotional symptoms report poor quality of life during menopause. A poor quality of life is also seen in women at other life stages who report emotional symptoms.

CONCLUSION

Researches reflected that biological and psychological changes may be more vulnerable with women experiencing menopause and thus reduces quality of life. The hectic schedule of women to fulfil all the demands of life creates a lot of stress, frustration, anxiety leading towards depression where hormonal changes also play their role. Changes in the family structure and/or the work place, death of loved ones, children leaving home for studies and job, financial difficulties, peaking professional responsibilities and ageing itself combined with unpredictable hormonal changes, leave woman fatigued, overwhelmed and out of control. Menopause is seen as a natural or expected change of state that is clearly distinct from negative and positive representations. In conclusion, women might represent menopause as being a negative or positive experience or as a life cycle transition.

To increase awareness and correct these misconceptions, whilst promoting good health and techniques to coping with this stage of life October 18th was created as World Menopause Day by International Menopause Society (IMS) and the World Health Organization (WHO) in 1984. IMS do its best to spread the world about potential health consequences of Menopause on this day. This day helps Peri-menopausal women to develop their knowledge of the symptoms and treatments available so that they can cope bravely with this condition during this

period. For those who have attained menopause it is the time to celebrate the strength each women possess and entered the next exciting phase of life.

REFERENCES

- Avis, N. E., Brockwell, S., Randolph Jr., J. F., Shen, S., Cain, V. S., Ory, M., et al. (2009). Longitudinal changes in sexual functioning as women transition through menopause: results from the Study of Women's Health Across the Nation (SWAN). *Menopause*, 16 (3), 442-452.
- Avis, N. E., Ory, M., Matthews, K. A., Schocken, M., Bromberger, J., & Colvin, A. (2003). Health-related quality of life in a multiethnic sample of middle-aged women: Study of Women's Health Across the Nation (SWAN). *Medical Care*, 41 (11), 1262-1276.
- Berterö, C. (2003). What do women think about menopause? A qualitative study of women's expectations, apprehensions and knowledge about the climacteric period. *International Nursing Review*, 50 (2), 109-118.
- Beverley, A., Forshaw, M., & Hunter, M. S. (2010). The impact of attitudes towards the menopause on women's symptom experience: a systematic review. *Maturitas*, 65 (1), 28-36.
- Bowles, C. (1986). Measure of attitude toward menopause using the semantic differential model. *Nursing Research*, 35 (2), 81-85.
- Bresnahan, M. J., & Murray-Johnson, L. (2002). The healing web. *Health Care for Women International*, 23 (4), 398-407.
- Brown, R. F., & Schutte, N. S. (2006). Direct and indirect relationships between emotional intelligence and subjective fatigue in university students. *Journal of Psychosomatic Research*, 60 (6), 585-593.
- Caltabiano, M. L., & Holzheimer, M. (1999). Dispositional factors, coping and adaptation during menopause. *Climacteric*, 2 (1), 21-28.
- Canadian Women's Health Network. (2006, June). *Menopause*. Retrieved from Canadian Women's Health Network Web site: <http://www.cwhn.ca/node/40801>
- Chedraui, P., Pérez-López, F., Morales, B., & Hidalgo, L. (2009). Depressive symptoms in climacteric women are related to menopausal symptom intensity and partner factors. *Climacteric*, 12 (5), 395-403.
- Choi, M. W. (2001). Menopause and mood: Are they connected? *Female Patient*, 26 (8), 62-63.
- Cohen, L. S., Soares, C. N., Vitonis, A. F., Otto, M. W., & Harlow, B. L. (2006). Risk for new onset of depression during the menopausal transition: the Harvard study of moods and cycles. *Archives of General Psychiatry*, 63 (4), 385-390.
- Col, N. F., Haskins, A. E., & Ewan-Whyte, C. J. (2009). Measuring the impact of menopausal symptoms on quality of life: methodological considerations. *Menopause*, 16 (5), 843-845.
- Dennerstein, L., Dudley, E. C., & Guthrie, J. R. (2003). Predictors of declining self-rated health during the transition to menopause. *Journal of Psychosomatic Research*, 54 (2), 147-153.
- Dukes Holland, K., & Holahan, C. K. (2003). The Relation of Social Support and Coping to Positive Adaptation to Breast Cancer. *Psychology & Health*, 18 (1), 15-29.
- Edgar, K. A., & Skinner, T. C. (2003). Illness Representations and Coping as Predictors of Emotional Well-being in Adolescents with Type 1 Diabetes. *Journal of Pediatric Psychology*, 28 (7), 485-493.

- Elavsky, S., & McAuley, E. (2007). Physical activity and mental health outcomes during menopause: a randomized controlled trial. *Annals of Behavioral Medicine*, 33 (2), 132-142.
- Everson-Rose, S. A., Lewis, T. T., Karavolos, K., Dugan, S. A., Wesley, D., & Powell, L. H. (2009). Depressive symptoms and increased visceral fat in middle-aged women. *Psychosomatic medicine*, 71 (4), 410-416.
- Fisher, J. M. (1994). Facing Menopause in the Workplace. *Personnel Journal*, 73 (10), 134-136.
- Glazer, G., Zeller, R., Delumba, L., Kalinyak, C., Hobfoll, S., Winchell, J., et al. (2002). The Ohio midlife women's study. *Health Care for Women International*, 23 (6-7), 612-630.
- Greendale, G. A., Lee, N. P., & Arriola, E. R. (1999). The menopause. *The Lancet*, 323 (9152), 571-580.
- Groomes, D. A., & Leahy, M. J. (2002). The Relationships Among the Stress Appraisal Process, Coping Disposition, and Level of Acceptance of Disability. *Rehabilitation Counseling Bulletin*, 46 (1), 14-23.
- Hunter, M. (2002). Coping with menopause: education and exercise are key. *Psychology Today*, 35 (2), 22-28.
- Igarashi, M., Saito, H., Morioka, Y., Oiji, A., Nadaoka, T., & Kashiwakura, M. (2000). Stress vulnerability and climacteric symptoms: life events, coping behavior, and severity of symptoms. *Gynecologic and obstetric investigation*, 49 (3), 170-178.
- Kaufert, P., Lock, M., McKinlay, S., Beyenne, Y., Coope, J., Davis, D., et al. (1986). Menopause research: the Korpilampi workshop. *Social science & medicine*, 22 (11), 1285-1289.
- Krishna, U. R., & Shah, D. (Eds.). (2004). *Menopause* (2nd ed.). Orient BlackSwan.
- Kuh, D. L., Wadsworth, M., & Hardy, R. (1997). Women's health in midlife: the influence of the menopause, social factors and health in earlier life. *BJOG: An International Journal of Obstetrics & Gynaecology*, 104 (8), 923-933.
- Kuppermann, M., Varner, R. E., Summitt Jr, R. L., Learman, L. A., Ireland, C., Vittinghoff, E., et al. (2004). Effect of hysterectomy vs medical treatment on health-related quality of life and sexual functioning: the medicine or surgery (Ms) randomized trial. *Jama*, 291 (12), 1447-1455.
- Lachman, M. E. (2004). Development in midlife. *Annual Review of Psychology*, 55, 305-331.
- Lequerica, A. H., Forschheimer, M., Tate, D. G., Roller, S., & Toussaint, L. (2008). Ways of Coping and Perceived Stress in Women with Spinal Cord Injury. *Journal of Health Psychology*, 13 (3), 348-354.
- Lewis, V. (2009). Undertreatment of menopausal symptoms and novel options for comprehensive management. *Current Medical Research and Opinion*, 25 (11), 2689-2698.
- Li, C., Wilawan, K., Samsioe, G., Lidfeldt, J., Agardh, C.-D., & Nerbrand, C. (2002). Health profile of middle-aged women: The Women's Health in the Lund Area (WHILA) study. *Human reproduction*, 17 (5), 1379-1385.
- Mayer, J. D., & Salovey, P. (1997). What is Emotional Intelligence? In P. Salovey, & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3-32). New York, NY: BasicBooks.
- Morse, C. A., Smith, A., Dennerstein, L., Green, A., Hopper, J., & Burger, H. (1994). The treatment-seeking woman at menopause. *Maturitas*, 18 (3), 161-173.

- Nagar, S. (1997). *The mystique of menopause: Women's perception* (Unpublished master's thesis). MS University of Baroda, Department of Home Science, Vadodara.
- Patrick, D. L., & Erickson, P. (1993). *Health Status and Health Policy: Quality of Life in Health Care Evaluation and Resource Allocation*. New York: Oxford University Press.
- Rotem, M., Kushnir, T., Levine, R., & Ehrenfeld, M. (2005). A Psycho Educational Program for improving women's attitudes and coping with menopause symptoms. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 34 (2), 233-240.
- Schutte, N. S., Malouff, J. M., Bobik, C., Coston, T. D., Greeson, C., Jedlicka, C., et al. (2001). Emotional intelligence and interpersonal relations. *The Journal of Social Psychology*, 141 (4), 523-536.
- Sharma, A., Vyas, N., & Mahajan, A. (2003). Changing quality of life of women in Himachal Pradesh. *HSAI XXV Biennial Conference Souvenir*. Nagpur: Home Science Association of India.
- Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, 129 (2), 216-269.
- Social Issues Research Centre. (2002). *Jubilee Women: Fiftysomething women – lifestyle and attitudes now and fifty years ago*. London: Choices Campaign, HRT Aware.
- The North American Menopause Society. (2007). *Menopause Practice: A Clinician's Guide* (3rd ed.). Cleveland, OH: The North American Menopause Society.
- Ussher, J. M. (1998). The menstruation and menopause: The making or breaking of woman? In G. N. Penny, P. Bennett, & M. Herbert (Eds.), *Health Psychology: A Lifespan Perspective* (2nd ed.). The Netherlands: Harwood Academic Publishers.
- Utian, W. H. (2005). Psychosocial and socioeconomic burden of vasomotor symptoms in menopause: A comprehensive review. *Health and Quality of Life Outcomes*, 3 (1), 47-57.
- Utian, W. H. (2001). Semantics, menopause-related terminology, and the STRAW reproductive aging staging system. *Menopause*, 8 (6), 398-401.
- Utian, W. H. (1999). The International Menopause menopause-related terminology definitions. *Climacteric*, 2 (4), 284-286.
- Wenzel, L., Glanz, K., & Lerman, C. (2002). Stress, Coping, Health Behavior. In K. Glanz, B. K. Rimer, & F. M. Lewis (Eds.), *Health Behavior and Health Education: Theory, Research, and Practice* (3rd ed., pp. 210-239). San Francisco, CA: Jossey-Bass.
- WHO Scientific Group. (1996). Research on the menopause in the 1990s: report of a WHO scientific group. *World Health Organization Technical Report Series*, 866, 12-14.
- WHO Scientific Group. (1981). Research on the menopause: report of a WHO Scientific Group. *World Health Organization Technical Report Series*, 670.
- Woods, N. F., & Mitchell, E. S. (2010). Sleep symptoms during the menopausal transition and early postmenopause: observations from the Seattle Midlife Women's Health Study. *Sleep*, 33 (4), 539-549.
- World Health Organization. (1948). World health organization constitution. Geneva, Switzerland: World Health Organization.

SELF ESTEEM, WELL BEING AND ADJUSTMENT AS PREDICTORS OF ACHIEVEMENT MOTIVATION IN ADOLESCENTS

Rupan Dhillon* and Deepti Randhawa**

ABSTRACT

Positive Psychology is the study that is focusing on conditions and processes that contribute to optimal functioning in people. It values the experiences of well being, contentment and satisfaction. The term excellence is associated with the quality of being excellent or to achieve something superior. In studies of excellence, there is no single direction for the study of superior abilities. Studies of achievement motivation suggest that individuals who have high achievement motives will act in ways that will help them to outperform others, meet or surpass some standard of excellence or will do something unique. It is also suggested that individuals who have a high level of self esteem and well being are more equipped and perform better in tasks. Therefore, these variables become important factors in predicting achievement motivation. In this study, focus is directed toward three predictors of achievement motivation: self esteem, well being and adjustment. A sample of 400 adolescents is taken from the age group of 14-19 years with equal number of males and females. The psychological tools used are Self Esteem Inventory, Adjustment Inventory, P.G.I. Well Being Scale and Deo Mohan Achievement Motivation Scale. Statistical analysis is applied and results are explained. The implications of the study are explained in context to achieving excellence.

Key Words: Self esteem, Well being, Adjustment, Achievement Motivation

INTRODUCTION

Excellence is the ability to envision what can be and then making it possible. It is bringing a vision to reality. Excellence is defined as the one that is at highest level, the individual who achieves something superior, in a position above what

* Assistant Professor, Department of Psychology, Guru Nanak Dev University
** Assistant Professor, AIBAS, Amity University, Gurgaon

as expected, exceeding all expectations, surprising, creating new possibilities in a given field of knowledge. Lot of people are born with high intelligence or cognitive ability and they are called gifted. Excellence is a universal idea but it is considered as a goal for very few. In order to achieve excellence in any field, there has to be a need to achieve. There should be an inherent capability too to make that vision a reality. It also requires dedication and perseverance.

There is a lot of controversy about motivation to achieve excellence. Some theorists state that it is inborn or innate while others contend that talented individuals are born in enriched home environments. It is also dependent on personality characteristics.

Motivation to achieve is defined as a stable characteristic which a person obtains by striving for and attaining a level of excellence. According to McClelland et al. (1953) it is an individual's desire for significant accomplishment, mastering of skills control or high standards. Achievement motivation is associated with prolonged and repeated efforts toward a single minded goal and to have a strong determination to win.

Individuals who are high on need to achieve will pick up tasks that are more challenging and will compete in situations where success is not easy. On the other hand individuals who are low on need to achieve will seek only those tasks where they can avoid negative implications. They want to avoid any kind of failure. The need for achievement theory by McClelland (1961) refers to an individual preference for success under conditions of competition. This theory also posits that people with a high need for achievement tends to set moderately difficult goals, make moderately risky decisions, want immediate feedback, become preoccupied with their task and assume responsibility (Moorhead and Griffin, 1995).

In a model proposed by Gagne (2004), it has been stated that high abilities depend upon natural and hereditary abilities that are spontaneously expressed. Talent derives from the interaction of natural abilities and the individual's developmental context, subject to learning processes and practice. The development of talent is linked three types of factors: intrapersonal (personality and motivation), environmental (socio- economic and educational) and factors such as chance or luck. This model is called The Differentiated Model of Giftedness and Talent.

Huitt (2001) states, that achievement motivation is an intrinsic force. It is the factor in an individual which arouses a goal and energizes behavior. Achievement motivation drives an individual to excel, succeed, or outperform others at some task (Hockenbury & Hockenbury, 2003). Snyder (2000) and Ryan and Deci (2000) have identified a number of processes that can foster or undermine motivation in educational settings. According to expectancy value theory, achievement beliefs (e.g., self-perceptions of competence) and behaviors (e.g., persistence) are determined jointly by the expectancy students have for success

and the subjective value they place on succeeding (Wigfield and Eccles, 2000). Deci and Ryan (1985) have given a self-determination theory, which recognizes the role of environmental conditions in either fostering or suppressing motivation.

Self esteem is a component of personality that encompasses our positive and negative self evaluations. It reflects overall evaluation or appraisal of his worth. Self esteem is the relationship between one's real self and one's ideal self (Leary and Baumeister, 2000). It has been found that people with high self esteem will have higher performance expectations than people with lower self esteem (Atkinson, 1966). When faced with same tasks the individuals who have higher self esteem and well being will perform better and will have a higher need to achieve. It has also been stated by Coopersmith (1967) that self esteem correlates positively with educational and occupational accomplishment.

Kaplan and Maehr (1999) found that pursuit of mastery is related with indices of well being such as emotional tone, peer relationship and impulse control. A study also reported that compared to mastery oriented students, helpless students had lower level of self esteem. Research states that goals related to excellence and self improvement are related to better socio economic functioning and more positive self evaluations whereas the tendency to validate and demonstrate one's personal qualities is more linked with adjustment problems and socio emotional vulnerability.

According to Keyes, Shmotkin and Ryff (2002) psychological well-being entails perception of engagement with existential challenges in life. Ryff (1995) and co-workers constructed six key dimensions of psychological well-being: self acceptance, positive relations with other people, autonomy, environmental mastery, purpose in life, and personal growth. In a study on adolescents in schools it has been found that perfectionism has been related to well being and motivation (Einstein et al. 2000). In another study, relationship of adjustment was studied with achievement motivation and it was concluded that achievement of the students gets effected by emotional adjustment (Swanson, 2000).

In this study, we have taken the variable of achievement motivation and we are going to study the effect of self esteem, well being and adjustment of the adolescent on this variable. We hypothesize that the adolescents will achieve more and will aim toward excellence if their self esteem, well being and adjustment are high and they feel secure and have good evaluations about their own self. The sample of adolescents is particularly chosen for this purpose as this is considered as a vulnerable period where the adolescent is already making lot of adaptations in his environment, therefore his motivation to achieve mastery or excellence in his tasks gets affected. The adolescent is also making adjustments at home, school, health/ emotional and in his social environment and he is also struggling with autonomy and decision making issues. So keeping all these factors in mind and also after studying the review of literature, the objective was framed

i.e. to identify self esteem, well being and adjustment as predictor of achievement motivation.

Hypotheses

The variables of self esteem, well being and adjustment would predict achievement motivation.

METHOD

Sample

In this study, 400 adolescents have been taken from various schools of Amritsar City. There are 200 males and 200 females and the age range is 14-19 years. The mean age of females is 17.24 years with standard deviation of 0.64 and the mean age males is 17.34 years with a standard deviation of 0.68. Incidental sampling technique is employed. The sample is more or less homogeneous on academic and socioeconomic status. The subjects who cooperated were taken for the purpose and those who did not wish to participate were not taken.

Tools

The following tools have been taken for this study:

- 1 Mohan Achievement Motivation Scale- (Deo and Mohan, 1986).
This scale is used to measure achievement motivation, consists of 50 items, 13 are negative and 37 are positive items. The items are rated on a 5 point scale. The test retest reliability coefficient is .83 for an interval of almost 3 months.

- 2 Adjustment Inventory (Mittal, 1974)
This inventory provides separate measures of adjustment in four areas:
 - i) Home adjustment
 - ii) Social adjustment
 - iii) Health and emotional adjustment
 - iv) School/ College adjustment

In all there are 80 items distributed equally amongst the four areas of adjustment. The respondents are required to record their responses in three categories, yes, no or ?. A high score indicates superior adjustment while a low score indicates poor adjustment. Maximum score is of 240 and the minimum is 80. Scores in four areas can be studied separately to find out in which area the adjustment is high and in which it is low. The reliability of the inventory after making use of Spearman Brown correction is .94 as suggested by the testmaker.

- 3 Self Esteem Inventory (SEI) (Coopersmith, 1987)

The SEI has designed to measure the evaluation attitudes towards the self in social, academic and personal areas of experience. For this

study the adult form has been used which has been adapted from the school short form. This form has 25 items and the subject is required to tick the items which are defining his personality. The scoring is done according to the scoring key provided by the test maker.

4. P.G.I. Well Being Scale (Verma et al., 1986)

It is a subjective scale to know about the well being and mental health of individuals. It can be used for all educational levels and can be administered to groups as well as individuals. It takes about 5 to 8 mins to complete it as it has only 20 items. The total score is calculated by counting the number of marked items. The inter rater reliability of the test is .86, test retest reliability of the test is .80 as suggested by the test maker.

RESULTS AND DISCUSSION

In this study, Stepwise Regression Analysis was applied. The analysis was to determine the predictors for the criterion variable of achievement motivation. The analysis was done separately for males and females. The results are elucidated according to regression coefficients.

Table 1: Table showing regression coefficients of Females (N=200)

Variables	R square	B	Beta	F ratio	Significance
School adjustment	.11	1.21	.33	24.80	0.01

The above table has clearly shown that the most important predictor of achievement motivation is adjustment in school. The variance explained by this variable is 11%. This enables us to understand the idea that for females the school environment plays a major role in order to excel or to achieve. Their need for motivation is enhanced in the school environment, therefore the better they adjust in school, the better they want to do in their academic milieu and in other activities. Classroom environments play an important role in shaping achievement motivation. Patrick, Kaplan and Ryan (2007) found that there is a strong positive relationship between students level of motivation and engagement and their perceptions of the classroom environments as being socially supportive. Shaikh (2000) found that there is a strong positive relationship between students level of motivation and their perceptions about classroom environment. Greater engagement and achievement is related with high social support from peers and teachers, cohesiveness, belongingness and goal orientation in school (Anderson et. al., 2004).

Table 2: Table showing regression coefficients of Males (N=200)

Variables	R square	B	Beta	F ratio	Significance
School adjustment	.15	1.16	.34	37.11	0.01
S.A., Well being	.18	1.08	.16	22.22	0.01

The above table shows that in case of males we have two important predictors. The first one is school adjustment and it contributes to 15% of variance. The second important contributor is well being and both the variables together contribute 18% of variance. Here it can be stated that even for males, the most important predictor for achievement motivation is the school adjustment, clearly showing that it is the most important developmental context /environment for enabling adolescents to achieve and excel. These kind of school environments have rules and structure and provide some level of choice in selecting goals and the means for achieving them(Newell and Van Ryzin, 2007). Mastery orientation is believed to develop in environments that provide high levels of warmth and acceptance and where mistakes are viewed as an opportunity for learning, rather than an indicator of failure (Hofer, 2002; Wentzel, 2002). Psychological well being is an important predictor too for achievement motivation. Adolescent's self esteem, well being and adjustment are influenced by feelings of acceptance by peers and also by academic success in school. Also, adolescents if allowed to participate in decision making in school, can adjust better in such environments and will have increases in well being. The more is their well being, the better they will concentrate on their talents and abilities and will achieve what they want to. With a better well being, the capacity and motivation to achieve will also increase.

In order to further know which predictors are important for high achievement motivation adolescents and for low achievement motivation adolescents, discriminant analysis was applied. Discriminant analysis was applied to two groups: high achievement motivation group and low achievement motivation group. These groups were obtained by taking the quartiles as cut off points on the total achievement motivation scores. Upper quartile was taken as high achievement motivation group and lower quartile was the low achievement motivation group. The results were obtained after applying discriminant analysis and the variables were thus placed according to the values of discriminant coefficients in descending order i.e. the variable having maximum weight in predicting group membership is placed at the top while variable at the lower and is having minimum weight. Results are reported in table 3 and table 4 for females and males respectively.

Table 3: Discriminant coefficients for females

GROUP I		GROUP II	
Low ach group		High ach group	
Variables significant	Disc coefficients	Variables significant	Disc coefficients
Well being	.312*	School adjustment	.928*
Home adjustment	.062	Health adjustment	.225
Social adjustment	.017	Self esteem	.120

Wilk's lamda is .724 which is significant at 0.01 level.

The results show that in case of females, school adjustment is the most important predictor for high achievement motivation group. This result is supporting our previous results of Regression Analysis. Well being is the most important predictor of low achievement motivation group suggesting that if well being of females gets effected, their motivation level will also be affected. The other variables are not suggesting significantly important contributions and hence are not explained further. Their group membership is however shown in the table.

Table 4: Discriminant coefficients for males

GROUP I		GROUP II	
Low ach group		High ach group	
Variables significant	Disc coefficients	Variables significant	Disc coefficients
Health adjustment	.208	School adjustment	.921*
Social adjustment	.182	Well being	.238
		Home adjustment	.131
		Self esteem	.122

Wilk's lamda is .720 which is significant at 0.01 level.

From table 4, it can be clearly stated that school adjustment is the most important predictor for high achievement motivation group. The other variables haven't given significant contributions and hence are not elaborated. Their group membership is however stated in the table.

In conclusion, it can be stated that for both males and females, school adjustment is the most important predictor for high motivation. Therefore we can say that supportive school environments that enable adolescents to excel will increase their motivation to achieve. School adjustment is very crucial for achievement motivation. Variables like self esteem, home adjustment or social adjustment haven't been able to give significant results, thereby clearly stating that the most important context is school adjustment. It can be suggested here that in order to increase the motivation of students, the approach should be structured for conforming pupils and open settings should be stimulated for autonomous learners. Also, the classroom activities are enjoyed more if the adolescents feel that they are supported by the teachers. Therefore, just as the adolescents are benefited by parents support in gaining autonomy at home, so are they benefited by the teachers support in achieving autonomy in school. Not only that, teachers support is also beneficial for academic achievements. Numerous studies have shown that the right amount of perceived autonomy support helps contribute to success in academic settings. The students who are autonomous in classrooms are high scorers on achievement and motivation. While the immediate experience of autonomy may not be directly facilitative of high course

grades, autonomy does seem to foster intrinsic goal orientation, task value and self efficiency, all of which are critical components of continuing motivation.

REFERENCES

- Anderson, A., Hamilton, R.J., Hattie, J. (2004) Classroom Climate and Motivated Behaviour in Secondary Schools, *Learning Environments Research*, 7, 211-225.
- Atkinson, J. and Feather, N. (1966). A Theory of Achievement Motivation. New York: Wiley and Sons.
- Coopersmith, S. (1967). The antecedents of Self Esteem. New York: W.H. Freeman Covington, M.V. and Omlich, C.L.
- Coopersmith, S. (1987). *Manual of Self Esteem Inventories (SEI)*, Consulting Psychologists Press, Inc. Palo Alto, CA
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109-13.
- Deo, P. and Mohan, A. (1986). *Manual for achievement motivation scale*. National Psychological Corporation, Agra.
- Einstein, D.A., Lovibond, P.F. and Gaston, J.E. (2000). Relationship between perfectionism and emotional symptoms in an adolescent sample. *Australian Journal of Psychology*, 52, 89-93.
- Gagne, F. (2004). Transforming gifts into talents: the DMGT as a developmental theory. *High Ability Studies*, 15(2), 119-147.
- Hockenbury, D. H., & Hockenbury, S. E. (2003). *Psychology*(3rd ed.). New York: Worth Publishers. 9-406.
- Hofer, B. K. (2002). Motivation in the college classroom. In W. J. McKeachie & M. Svinicki (Eds.), *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers*. New York: Houghton Mifflin.
- Huitt, W. (2001). Motivation to learn: An overview. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University.
- Kaplan, A. and Maehr, M.L. (1999). Achievement goals and student well being. *Contemporary Educational Psychology*, 24, 350-358.
- Keyes, CLM, Shmotkin, D. and Ryff, C.D. (2002). Optimizing Well Being : The empirical encounter of two traditions. *Journal of Psychology and Social Psychology*. 82, 1007-1022.
- Leary, M.R. and Baumeister, R.F. (2000). The nature and function of self esteem: Sociometer theory. In M. Zanna (Ed.), *Advances in social experimental psychology*, Vol.32, 1-62. San Diego, CA. Academic Press.
- McClelland, D.C., Atkinson, J.W., Clark, R.A., and Lowell, E.L. (1953). *The Achievement Motivation*: New York: Appleton-Century-Crofts.
- McClelland, D.C. (1961). Method of measuring human motivation. In John W. Atkinson Ed. *The achieving Society* (Princeton N.) D. Van Nostrand, 41-43.
- Mittal, V.K. (1974). *Manual for Adjustment Inventory*, Meerut Cantt., Monovigyan Kendra.
- Moorhead, G. and Griffin, R.W. (1995). *Organization Behavior. Managing people and Organization*, Houghton Mifflin Company. Boston.

- Newell, R. J., & Van Ryzin, M. J. (2007). Growing hope as a determinant of school effectiveness. *Phi Delta Kappan*, 88(6), 465.
- Patrick, H., Ryan, A., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology*, 99, 83-98.
- Ryan, M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Ryff C.D. (1995). Psychological well being in adult life. *Current Directions in Psychological Science*, 4, 99-104.
- Shaikh, R (2000): A Study of anxiety and achievement of students in relation to their school and home environment. Unpublished Dissertation.
- Snyder, C. R. (2000). The past and possible futures of hope. *Journal of Social & Clinical Psychology Special Issue: Classical Sources of Human Strength: A Psychological Analysis*, 19(1), 11-28.
- Swanson, H.L. (2000). Issues Facing the field of learning disabilities. *Learning Disability Quarterly*, 23, 37-49.
- Verma, S., Kuldip, K. and Madan (1986). PGI well being scale. *Indian Journal of Clinical Psychology*, 13, 195-198.
- Wentzel, K. R. (2002). The contributions of social goal setting to children's school adjustment. In J. S. Eccles & A. Wigfield (Eds.), *Development of achievement motivation* (pp. 222-241). New York: Elsevier.
- Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology Special Issue: Motivation and the Educational Process*, 25(1), 68-81.

MANAGEMENT OF FRUSTRATION AMONG LOW ACADEMIC ACHIEVING ARTS POST-GRADUATE STUDENTS OF TRIPURA UNIVERSITY

Rajesh Ganesan and Moon Banerjee***

ABSTRACT

The aim of the present study is to manage various Reactions to Frustration among Low Academic achieving Arts Post-graduate students of Tripura University. Based on purposive sampling technique, 30 low academic performance post-graduate students (below 50% marks in the last examination), were selected from various Arts department of Tripura university. Their age ranged from 21-25 years. The frustration level of post-graduate students was measured using 'Reactions to Frustration' Scale. Then intervention techniques (Anger-reversal, Breathing Rate Reduction Laughter, Relaxation Response, Tension Relaxation Technique) were administered to the post-graduate students for a period of 4 weeks. After the completion of 4 weeks, the level of frustration was again assessed. Results indicated that there is reduction in the level of frustration among the post-graduate students.

Key Words: Frustration; Low Academic; Post-graduate students.

INTRODUCTION

Education is a powerful and pervasive agent for all round development, individual and social transformation. This alone can sustain culture and civilization. A balanced development of mind and body in harmony with the spirit is the key to enrichment of human personality and also the key to become a successful student. Through education, a student attains all round development. It also refines students in interacting with the outer world and also his thought process. But

* Assistant Professor & In-Charge, M.S. (ISA), Ph.D., Department of Psychology, Tripura University (A Central University), Tripura West- 799 022

** Research Scholar, Department of Psychology, Tripura University (A Central University), Tripura West- 799 022; moonb24@gmail.com

there are many obstacles which are acting as frustrating sources among the low academic achieving students that effect their goal orientation. Many of these post-graduates students, particularly with low academic background struggle academically due to various frustrations.

"Frustration is defined as a state of emotional stress characterized by confusion, annoyance and anger" (Stagner, 1961). Sources of frustration may be internal or external. Internal sources of frustration involve personal deficiencies such as lack of confidence, fear of social situations, conflict etc. External causes of frustration involve conditions outside the person. The responses to frustration by individuals can be either adaptive or maladaptive. Adaptive responses are constructive and are implemented to solve the problem that is blocking goal attainment. Maladaptive responses, on the other hand, are characterized by a lack of constructive problem solving ability and often make the frustrating experience worse by creating additional problems. These maladaptive responses may be further categorized into objective (aggression, regression, withdrawal, fixation, resignation) and subjective (extra-punitive, intropunitive, impeditive) responses.

According to Freud (1920), "Frustration occurred when ever pleasure seeking or pain avoiding behaviour was blocked." The credit for developing the concept of frustration in human beings goes to Freud. He has developed a frustration-aggression theory in a systematic way where frustration occurs whenever pleasure seeking or pain avoiding behaviour is blocked. Interruption to goal seeking behaviour causes frustration. The person's awareness of his inability to satisfy his drives and his failure to reach the goals he has set for himself makes him helpless and he suffers from injured pride leading to frustration. Frustration is expressed in various modes-Aggression, Resignation, Fixation and Regression (Eyesenck, 1972). According to Freud, Aggression is an expression of Frustration. Frustration always leads to some form of aggression. Sometimes frustration leads to designated behaviour. It is type of action in threatening manner which is intended to hurt individual physically or self in some way. Resignation is state of uncomplaining, utter frustration. It is the act of admitting defeat. There is extreme elimination of needs, no plans, and no future orientations, withdrawal from social contacts, isolation, and lack of interest in the surroundings. A person with severe frustration tries to escape or withdraw from certain situations. Fixation is persistent attachment to the entire complex of the self and object relation. This is closely related to Freud's Psychosexual Therapy. Regression is a kind of defence mechanism where one abandon adult coping strategy is more like child behaviour (Dixit, 1985).

In the case of students also, outcome of successful efforts to satisfy needs will be a mental state characterised by pleasant happy feelings and emotions. The student likes to repeat such states time to time. This will help student to handle boredom and make academic progress. On the other hand, the results of preventing

a student from achieving satisfaction will be a negative and painful mental state characterised by feelings such as dissatisfaction, anger, tension and fear, coupled with physiological changes such as high blood pressure, fast heart beat and rapid breathing. Such feelings are painful, and the student does not want to experience them again. Therefore, frustration in psychological literature means a negative mental state as a result of stopping someone from satisfying his or her needs or goals. When low academic students go through severe or permanent mental states of frustration, then their learning activities gets effected which results in poor performance.

Causes of Frustration among Students

One of the biggest sources of frustration for a student of almost any age is grades. In most educational systems, grades are used to sort, measure, and classify students. Early grades have a long-term impact on the student. Low or lower than expected grades can cause serious frustration in a student or in some cases it causes serious anxiety and depression.

Along with other sources of pressure in a student's life that lead to frustration are the deadlines that frame the student's experience of frustration. Projects, assignments, exams, essays, meetings, and other obligations flow together in a student's life under the pressure of deadlines. Sometimes several events occur at the same time and place extra frustration on a student whose workload suddenly increase significantly. When a student is attending several difficult classes, due dates for assignments may not be harmonized. This gets difficult on the part of the student to handle the increased work load, which leads to frustration.

Expectations for a student from friends, family, teachers, and peers vary from student to student. Sometimes students face very high expectations, which is a source of frustration. This is especially the case when high expectations intersect with close deadlines and heavy workload. When social acceptance is lacking, student faces lack of social support. A failure to meet expectations results in increased and prolonged frustration in students. The present study was intended to find out why the post-graduate students didn't achieve the standard expected as a representative sample for all the low academic performing Arts post-graduates students of Tripura University.

Review of Literature

Vitasari (2010) reported that frustration is one of the wide varieties of emotional and behaviour disorders and it is a major predictor for low academic performance among students. Students need some form of intervention to reduce frustration and improving academic performance. Intervention is designed to help students handle the problem of frustration while studying. In this paper, an intervention program is designed to help students to improve their academic performance. Twelve healthy students are selected for this research from five

engineering faculties at University Malaysia Pahang. They are divided into two equal groups, the experiment group and the control group. Each group consists of six participants. The training runs on duration of six sessions with the experiment groups receiving full training and no training for the control groups. The results shows that the experiment groups performed better in coping with frustration levels as well as in enhancing the academic performance compared to the control groups. Intervention programme was proved effective in improving academic performance among the university students.

Dhal (2012) investigated the relationship of creativity, reactions to frustration and academic achievement of secondary school students separately for boys and girls. A sample of 220 students (110 boys and 110 girls) of IX class was drawn randomly from different government aided schools of Amritsar city. The findings of the study revealed that reactions to frustration are positively related with creativity for secondary school students. A significant positive relationship was found between reactions to frustration and academic achievement of secondary school students.

Shivakumara (2014) has identified the magnitude of different modes and global frustration, to find out the effect of domicile on level of frustration of delinquent adolescents and normal adolescents. Sample consists of 321 subjects comprising of delinquent adolescents and normal adolescents. Their age ranged between 14-18 years. In the delinquent adolescents group the male adolescents who had committed offense and conformed cases of offenses under Indian Penal Code (IPC) were selected. The comparison group of adolescents consisted of normal adolescents without having any delinquent background and studying in 8th grade to II pre-university course. The selected subjects were administered individually with frustration test. After calculating mean and SD for the groups, 't' analyses were carried out. Findings revealed that the frustration potential is higher among the delinquent adolescents on global frustration and on different modes than the normal adolescents. Irrespective of the domicile, the delinquent adolescents are prone for higher frustration, but among the normal adolescents only the rural adolescents are found to be prone for higher frustration potential.

During university level education, students encounter various academic demands like large amounts of information presented in textbooks and during lectures, in addition to homework assignments, projects, and papers for multiple classes. So the present study aims to manage frustration among the low academic achieving Arts post-graduate students of Tripura University.

Objectives of the Study

To assess the efficacy of behavioural intervention module in reducing frustration among low academic achieving Arts post-graduate students.

Hypothesis

The level of frustration reactions (aggression, resignation, fixation and regression) will reduce after applying behavioural intervention to the post-graduate students.

METHOD

Design

A repeated testing (Pre-Post) design was used, where frustration of the respondents was assessed before and after provision of the behavioural intervention module.

Sample

On the basis of purposive sampling technique 30 (Males=15; females=15) post-graduate students were selected for the present study. Their age ranged from 21-25 years. All the student possessed a history of low academic performance with below 50% marks in the last examination and poor retaining and recalling capacity. The sample was collected from various Arts Departments (History, Political science, Education, Philosophy and English) of Tripura University. Information regarding demographic variables like age, economic status, area of living, socio-economic background of the respondents was obtained.

Tools

Reactions to Frustration Scale (Dixit and Srivastava): This scale has 40 items which measure the level of frustration in four dimensions, i.e., aggression, resignation, fixation and regression. There are ten items for each reaction to frustration, where the number of positive and negative items are equal. The items are given as simple statements and the respondent is provided with six alternative response options graded on a six point scale. This test is developed for student population. The tool has good psychometric properties as reliability of the frustration scale is 0.92 and validity is 0.61.

Behavioural Intervention Module: The module comprised of the following techniques.

Anger-reversal Technique: This technique was developed by Rajesh in 2014. Exaggerated anger or aggressive behaviour has been posing great threat to the development of the individual. The breathing pattern and the skeletal-muscular reactions elicited along with the expression of the emotion of anger, when rehearsed in a controlled manner can help gain voluntary control of the emotion of anger (Ganesan and Ganesan, 2004). This technique helps in regulating one's own Anger level. This Behavioural Rehearsal Exercise is described below:

Step - I: Be seated on a chair, stool or bench - press your feet strongly over the floor. Experience the muscle tension in your calf muscles and thigh muscles.

- Step - II: Clench your fists, with the elbows bent and forearms parallel to the floor. Experience the muscle tension in the fists, fore-arms, upper arms, shoulders and chest.
- Step - III: Bite the teeth. Experience the tension in the jaw muscles.
- Step - IV: Open the eyes as widely as possible, raise the eyebrows and stare straight, in line with your eyes.
- Step - V: Bite the teeth and breathe through the teeth and nostrils, noisily and swiftly.
- Step - VI: Give a command to yourself as follows: Call yourself by your name' and say for example: "Ram / Sita – Get ready and get angry" - Follow this by adopting all the above six step (Steps I-VI) simultaneously. Maintain this behaviour for 15.
- Step- VII: Call yourself by your 'name'; again and say for example: "Ram or Sita – Reduce anger and relax" –

Follow by simultaneously closing your eyes and lips, breathing deeply, relaxing your fingers and toes and hanging the head down. Experience the relaxation for 45 seconds. Repeat the steps VI and VII, ten times.

Follow this by total relaxation of the body by lying down on the back, keeping the hands by the sides with palms facing up, fingers let loose, and legs kept apart with 12 inches between heels. Relax the fingers and toes and slowly exhale and inhale for a period of 15 minutes.

Breathing Rate Reduction Technique: This technique was developed by Rajesh in 2014. The normal breathing rate per minute is 15 sets of exhalations and inhalations. The reduction in the breathing rate will facilitate considerable reduction in the psycho - physiological - arousal that will result in the onset of relaxation of response. The client is asked to count the exhalations and inhalations per minute and to divide that number by two. This figure provides the sets of exhalations and inhalations per minute. When the above technique is repeated 6 times, every time trying to exhale and inhale slower and slower, the breathing rate per minute will gradually come down to 5 or even 3. However reduction to 5 times itself is enough. This technique can be self - administered by the client 6 times a day. This will produce a spill-over-effect and slow down the breathing rate for the whole day. This technique has been found to be effective in the management of anxiety, anger and aggression, sexual arousal, obsessive thoughts.

Laughter Technique: This technique was developed by Ganesan and Ganesan in 2005. It empowers the enhancement of: 1. The quantum of inhalation of oxygen. 2. The quantum of exhalation of waste gases from the lungs. 3. Secretion of endorphin, that helps produce relaxation response.

Procedure

STEP - I: Produce noise like, HA...HA... HA...

STEP - II: Produce noise like, HEE...HEE... HEE...

STEP - III: Produce noise like, HOO...HOO... HOO...

STEP - IV: Produce noise like, HAY...HAY... HAY...

STEP - V: Produce noise like, HO...HO... HO...

STEP - VI: Produce noise UNLIKE ANY OF THE ABOVE

STEPS I to VI are to be produced for a period of 30 minutes,

Follow this by total relaxation of the body by lying down on the back, keeping the hands by the sides with palms facing up, fingers let loose, and legs kept apart with 12 inches between heels. Relax the fingers and toes and slowly exhale and inhale for a period of 30 minutes.

Benson's Relaxation Response: The Benson's Relaxation Response (modified version) was developed by Ganesan (2009). The term, 'Relaxation Response' was coined by Dr. Herbert Benson, Professor, author, Cardiologist, and founder of Harvard's Mind or Body Medical Institute. This technique was developed by Benson in 1984. The response is defined as the personal ability to encourage the body to release chemicals and brain signals that make the muscles and organs slow down and increase blood flow to the brain.

Steps involved in Benson's Relaxation Response:

STEP-I: Sit comfortably.

STEP-II: Keep the left hand palms straight facing up resting over thigh & the right hand palm straight facing up resting over thigh.

STEP-III: Keep head, neck, & spine erect, straight & relaxed.

STEP-IV: For the first 2 minutes observe what thoughts are passing in mind. Do not get disturbed by the flow of thoughts and ignore the external noises.

STEP-V: Pronounce the name of the favourite God mentally for 16 minutes.

STEP-VI: Pronounce the name of God mentally when breathing out & maintain silence while breathing in.

STEP-VII: Finally remain silent for 2 minutes and slowly open the eyes.

Tension Relaxation Technique: This technique is developed by Ganesan (1990). The procedure of this technique is:

Step 1: Be seated in the chair with the spine erect.

Step II: Press the feet strongly over the floor experiencing muscle tension in calf and thigh.

Step III: Bend elbows and forearm parallel to the ground.

Step IV: Clinch the fist and experience the muscle tension in the fist, forearm, upper arm, shoulder and the chest.

Step V: Close eyes bite the teeth, jaw muscles, forehead muscles.

Step VI: Give a command to yourself: 'Get ready get tense'.

Step VII: Hold the breath and tense the muscles from the top of the head

to the feet. Release the breath by giving the command 'reduces the tension and relaxes'.

The steps should be repeated for 10 times. Each session of this intervention technique involves 30 minutes.

Procedure

First a proper rapport was established with the post-graduate students and The Demographic information was were obtained. Self administered method was used in case of data collection. The Reaction to Frustration scale was presented to the post-graduate students. The students were instructed to evaluate their feelings of frustration on a six point scale. Then the above mentioned intervention techniques were administered to the post-graduate students for 4 weeks .After the completion of 4 weeks, the level frustration was again assessed.

RESULTS

The obtained data was analysed by computing Mean and Standard deviation. Further, t-test was employed for determining the significant difference between the mean before and after reactions to frustration level among the post-graduate students.

Table 1: Mean, standard deviation and t-value of Frustration reactions before and after behavioural intervention.

<i>Variable</i>		<i>Mean</i>	<i>SD</i>	<i>t-value</i>	<i>Level of significance</i>
Aggression	Before	27.6	5.08	10.19	0.05
	After	21.9	3.74		
Resignation	Before	27.13	4.63	9.13	0.05
	After	22.5	3.61		
Fixation	Before	27.63	3.83	10.60	0.05
	After	23.1	2.64		
Regression	Before	30.8	4.23	10.43	0.05
	After	25.53	4.48		
Total score of Reactions to Frustration	Before 113.16	10.15	17.41	0.05	
	After	94	8.07		

From Table 1, it is apparent that the mean scores on all the dimensions of frustration, i.e. aggression, resignation, fixation and regression, as well as the total score, were lower after the behaviour intervention and all the comparisons of the before after means were significant beyond the .05 level of significance. Thus, the present results verify the hypothesis that predicted that the level of

frustration reactions (aggression, resignation, fixation and regression) will reduce after applying behavioural intervention to the post-graduate students.

DISCUSSION

Demographic information indicated that the majority of students belonged to well settled families and few of the students had financial responsibilities on their back. Moreover, other cause of frustration was concerning greater academic demands from parents. Consequently, it was established that superior academic load is most critical factor affecting students and a root to frustration among them. Thus frustration causes an individual to revert to the modes of action that has characterised his behaviour to earlier developmental stage (Freud, 1933).

In the present study, intervention module was applied to manage the intensity of Frustration among the low academic achieving arts post-graduate student of Tripura University. The aim of intervention was to eliminate the incidence of various reactions to Frustration among the post graduate students. It was found that the intervention has reduced the reactions of frustration among the post graduate students. At the same time, the tendency to exhibit repetitive fixation behaviour, anxiety about future, withdrawal, irritation, depressive mood, aggressive acts has also minimised.

According to Rosenweig (1944), "Frustration occurs wherever the organism meets a more or less instrumental obstacle or obstruction in its route to the satisfaction of the vital needs." The obstacle can be of active or passive sort. Related to anger and disappointment, it arises from the perceived resistance to the fulfilment of individual will. The greater the obstruction, and the greater the will, the more is the frustration. While coping with frustration, sometimes individuals engage in passive-aggressive behaviour, making it difficult to identify the original causes of their frustration. The occurrence of aggression always presupposes the existence of frustration and vice-versa. Thus frustration has its own system. It has four modes of reactions to a situation like aggression, resignation, fixation and regression. Aggression indicates frustration dynamics in hostile situation, resignation is the extreme escapism from reality, regression is the condition to go back and fixation is the compulsive type of behaviour.

Frustration is devastating for students. It can hinder their successful life even frustration can ruin everything if not handled properly. It can be demonstrated that greater academic demands from parents and death or losing of loved ones are most critical factor affecting students and a root cause of frustration among them. There are many reactions of frustration among the low academic performing students that leads to poor academic performance sometimes. Enduring depressed mood, crying spells, loss of interest or pleasure, decrease in aptitude level, feeling fatigue and feeling of anger are dominant feelings among students during frustration. The present study reveals that students who are severely frustrated

in any situation try to escape or withdraw from that situation. Furthermore, students faced difficulty in making right decisions. Students made withdrawal responses and these resulted in conflict. The students are simultaneously stimulated by two aversive stimuli in a situation where movement away from other stimulus results in approaching the other aversive stimulus. This resulted in extreme elimination of needs, lack of future orientation plans, withdrawal from social contacts, isolation, difficulty in forming new attachment and adaptation, departing from friends, family etc.

The present results indicate that psychological intervention is effective in reducing the frustration reactions, which are experienced even by university students. Thus, incorporation of such behaviour interventions in the curriculum at all educational levels could help in managing and mitigating the frustrations and stresses experienced by the students. Further research regarding the impact of such behaviour interventions on academic performance could help in establishing the importance of such interventions in the education system.

REFERENCES

- Gulzar, S., Yahya, F., Nauman, M., Mir, Z & Mujahid. S. H. (2012). Frustration among university students in Pakistan. *International Research Journal of Social Sciences*, 1(4), 7-5.
- Ganesan, V., and Rajesh, G. (2009). Application of Behaviour Technology. In Husian, A. (Ed.) *Applied Psychology: Asian Perspective*. New Delhi: Global Vision Publishing House.
- Hilmi. F. (2015). The Structure and Development of University' Students Frustration' Field' Study' in' Jordan. *Advances in Social Science Research Journal*, 2(10) 11-27.
- Indu Rathee (2014). Investigating the Frustration of Teachers working in Residential and Non-Residential schools. *International Educational E-Journal*, Volume-3, Issue-2.
- K. Shivakumara1, Sangeetha R. Mane, Ashok A. Pal and Ravikanth B. Lamani, (2014). Frustration Potential of Delinquent Adolescents. *British Journal of Education, Society & Behavioural Science* 4(5): 581-591.
- Manpreet kaur, 2014. Study of adolescence problems in relation to Frustration of mansa district. *International journal of research in humanities, arts and literature*, Vol. 2, issue 6, 103-122.
- Rajesh, G (2014). Application of Brief Behaviour Technology for Reduction of Breathing Rate and its Effectiveness in Management of Complex Emotional Problems. National proceedings of the UGC sponsored National Conference on Enhancing Psychological wellbeing. Feb 20-21, 2014. Department of Psychology, Bharathiar University, Coimbatore.
- Shikha Dhall (2012). A study of creativity in relation to reactions to frustration and academic achievement of secondary school. *Indian J. Innovations Dev.*, Vol. 1, No. 6.

MENOPAUSE ANXIETY AMONG WOMEN

Rita Rani Talukdar* and Sukanya Bora**

ABSTRACT

Life of women in the middle age can be a difficult time due to tremendous changes, both physically and emotionally. Getting older is a drag, and middle age is particularly fraught with tension. Ageing, alteration of the hormonal milieu and women's personality are the major contributors in this respect. Women in late middle age experience menopause. Menopause, also known as the climacteric, can have many side effects. Menopause is when a woman's menstrual period stops permanently. Although it also ends fertility, one can stay healthy, vital and sexual. Some women feel relieved because they no longer need to worry about pregnancy. Even so, the physical symptoms, such as hot flushes, abnormal vaginal bleeding, vaginal urinary symptoms and emotional symptoms of menopause may disrupt sleep, lower your energy or — for some women — trigger anxiety or feelings of sadness, mood changes and loss of sleep. Anxiety appears to affect almost twice as many women as men and is a common symptom of menopause. According to the National Institute of Mental Health, women are 60 percent more likely than men to experience an anxiety disorder over their lifetime. Anxiety during menopause can be a transient emotional challenge or it may indicate a more serious condition. So one should not hesitate to seek treatment for symptoms that bother them. Many effective treatments are available, from lifestyle adjustments to hormone therapy.

Key Words: Women, middle age, menopause, climacteric, anxiety.

INTRODUCTION

Women in the Middle Ages possess a number of multiple convivial roles. The very concept of "woman" changed in a number of ways during the Middle Ages and several forces influenced women's role during this period. Middle age is the period of age beyond young adulthood but before the onset of old age. Various attempts have been made to define this age and it can vary between cultures and historic or previous definitions of this stage of life. This is a time of tremendous change, both physically and emotionally, which may follow from interactions between biological changes and psycho-social life events. Ageing, alteration of

the hormonal milieu and women's personality were the major contributors in this respect. Those in middle adulthood come to the realization that life will not last forever and that there are limitations to what one might accomplish or achieve. It quite often happens that a middle aged family member must experience the death of one's parents. Women in late middle age experience menopause. Menopause, also known as the climacteric, which can have many side effects, some welcome and some not so welcome. Menopause ends natural fertility during this life stage, which is a normal condition that all women experience as they age. The term "menopause" can describe any of the changes a woman goes through either just before or after she stops menstruating, marking the end of her reproductive period. Natural menopause is not brought on by any type of medical or surgical treatment. The process is gradual and has three stages:

Perimenopause: This typically begins several years before menopause, when the ovaries gradually make less estrogen. Perimenopause lasts up until menopause, the point when the ovaries stop releasing eggs. In the last 1 to 2 years of perimenopause, the drop in estrogen quickens. At this stage, many women have menopause symptoms.

Menopause: It is the period in women's life when menstruation ceases. Menopause is a normal condition that all women experience as they age. The term menopause can describe any of the changes a woman goes through either just before or after she stops menstruating, marking the end of her reproductive period.

In this study it is the point when it's been a year since a woman last had her last menstrual period. At this stage, the ovaries have stopped releasing eggs and making most of their estrogens.

Postmenopause: These are the years after menopause. During this stage, menopausal symptoms such as hot flashes ease for most women. But health risks related to the loss of estrogen rise as the woman ages.

Somatic and emotional disturbances occur frequently during women's mid-lives, such as irritation, depressive mood, sleeping problems, fatigue, headache, muscular-skeletal pains and joint problems. These problems are considered as atypical because the prevalence of these symptoms is not only limited to women of menopausal age. In addition, the occurrences of these symptoms have no direct relation with hormonal changes (Ballinger et al., 1987). Along with the physiological alterations, many chronic diseases (cardiovascular diseases, diabetes, osteoporosis, obesity and cancer) increase when women reach their middle age.

Psychological symptoms include anxiety, poor memory, inability to concentrate, depressive mood, irritability, mood swings, less interest in sexual activity.

Menopause Causes

A woman is born with a finite number of eggs, which are stored in the ovaries. Menopause occurs due to a complex series of hormonal changes. The ovaries also make the hormones estrogen and progesterone, which controls menstruation and ovulation. Associated with the menopause is a decline in the number of functioning eggs within the ovaries. Menopause happens when the ovaries no longer release an egg every month and menstruation stops.

At the time of birth, most females have about 1 to 3 million eggs, which are gradually lost throughout a woman's life. By the time of a girl's first menstrual period, she has an average of about 400,000 eggs. By the time of menopause, a woman may have fewer than 10,000 eggs. A small percentage of these eggs are lost through normal ovulation (the monthly cycle). Most eggs die off through a process called *Atresia* (the degeneration and subsequent re absorption of immature ovarian follicles - fluid filled cysts that contain the eggs). Menopause is considered a normal part of aging when it happens after the age of 40. But some women can go through menopause early, either as a result of surgery, such as hysterectomy, or damage to the ovaries, such as from chemotherapy. Menopause that happens before 40, regardless of the cause, is called premature menopause.

There is absolutely a connection between hormonal changes and psychiatric symptoms in general, and women undergoing specific hormonal changes have increased risk for particular psychiatric disorders. With respect to anxiety, women in the perimenopausal period are more likely to experience panic attacks and other anxiety symptoms than other women of the same age who are either pre- or postmenopausal. The postpartum period is another time when women appear to be more vulnerable to psychiatric symptoms, particularly depression, which is often associated with anxiety.

Anxiety appears to affect almost twice as many women as men and is a common symptom of the menopause. According to the National Institute of Mental Health, women are 60 percent more likely than men to experience an anxiety disorder over their lifetime. While most women do not associate menopause with anxiety, increases in this psychological phenomenon are common during the menopausal transition.

Because estrogen and other hormonal influxes during menopause affect the brain's regulation of mood, hormonal changes can cause some women to experience anxiety during menopause. "Menopause has also been identified as a time when women can be vulnerable to developing emotional and mental health issues such as depression and anxiety." A 2012 study published in *Climacteric* found that women with psychological and social stressors and severe hot flushes were more at risk of developing anxiety during the menopause

transition. Anxiety is when you are continually worried or tense. It is a psychological state characterized by excessive and persistent worry, tension, and nervousness. Anxiety can also disturb sleep, leading to a host of other menopausal problems such as memory lapses and headaches.

Anxiety during menopause can be a transient emotional challenge or it may indicate a more serious condition. In any case, the best way to get a handle on anxiety is to become informed about this common symptom of menopause. Women may feel an increase in anxiety before other symptoms of menopause, such as hot flushes, set in.

For women who are concerned about anxiety during menopause, it is extremely valuable to gain insight into anxiety, its various manifestations, its symptoms, and its causes. Understanding these aspects of anxiety can help women determine the best way to manage and treat anxiety during menopause.

Causes of Anxiety

For women in their 40s and 50s who are going through menopause, one of the most common causes of anxiety is decreased estrogen levels. Estrogen declines during perimenopause, or the time before menopause, as the body prepares to cease egg development and menstruation. Scientists have discovered that estrogen has a significant effect on the brain's regulation of moods and emotion. While anxiety is the result of a complex interplay of social, biological, and psychological factors, hormonal changes are often the root cause of anxiety during menopause. Because of fluctuating estrogen levels, a menopausal woman may experience marked differences in the way she feels. While this relationship appears complex, experts do know that changes in estrogen levels have a direct effect on the neurochemicals serotonin, norepinephrine, dopamine, and melatonin. Since all of these chemicals play an integral role in emotion and mood regulation, disruptions caused by estrogen fluctuations can lead to anxiety during menopause. While the primary cause of anxiety in menopause is hormonal, other medical and psychological conditions can cause anxiety.

CONCLUSION

Anxiety in menopause can range from a mild annoyance to a major disability. While most menopausal women do not necessarily develop a clinical anxiety disorder, these conditions are not uncommon. Once menopause passes, many women find that their level of anxiety decreases. However, in addition to hormonal changes, there are often many other factors that contribute to the development of anxiety during menopause. For example, women who suffer more physical symptoms, experience negative life events or who are less functional are more likely to develop an anxiety disorder during menopause than women without these additional stressors. So, it is important not to ignore other possible causes of anxiety—just because a woman may be experiencing menopause. Because the

exact causes of anxiety are complex, it is important for a woman who is experiencing this symptom to understand all of the possible causes. This can greatly help her to determine the best way to control and manage her anxiety. Treatment of anxiety is always warranted if there is significant distress or functional impairment. It is often comforting for a woman to understand that her anxiety is likely the result of normal hormonal changes. Understanding the causes of anxiety can greatly help a woman determine the best way to seek relief from these troublesome symptoms. Today, more and more women find that dealing with menopause symptoms is best accomplished via a combination of healthy lifestyle and alternative treatments.

REFERENCES

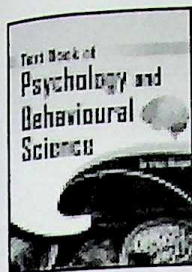
- Cannon, Mary (2003-06-26). *Male Biological Clock is Ticking*, TooWebmd Health News. Retrieved 2009-10-16.
- Collinsdictionary.com. "Collins English Dictionary" - Complete & Unabridged 11th Edition. Retrieved December 05, 2012.
- Feldman, Robert (2015). *Discovering the life span*. Boston: Pearson. ISBN 9780205992317.
- Fertility Treatment Less Successful After 35: In Vitro Fertilization Doesn't Compensate for Decreased Fertility With Age
- Rabin, Roni (2007-02-27). It Seems the Fertility Clock Ticks for Men, Too. *The New York Times*. Retrieved 2009-10-16.
- Richard Alleyne, Richard (16 Mar 2010). Middle age begins at 35 and ends at 58 - Telegraph. *Science Correspondent* (Telegraph).
- Stern, Theodore (2016). *Massachusetts General Hospital comprehensive clinical psychiatry*. London: Elsevier. ISBN 978-0-323-29507-9; Access provided by the University of Pittsburgh

Books on Psychology

Title	Author/Editor	Price
Text Book of Psychology and Behavioural Science ISBN: 978-81-8220-942-8	Dr. Vidya Bhagat	Rs. 950
Business Psychology ISBN: 978-81-8220-946-6	NovRattan Sharma & Amrita Yadava	Rs. 1600
Explorations in Human Spirituality ISBN: 978-81-8220-979-4	Akbar Husain	Rs. 1300
Global Encyclopaedia of Clinical Psychology ISBN: 978-81-8220-983-1	Arti Sharma	Rs. 2500
Cyber Psychology ISBN: 978-81-8220-830-8	Ravindra Thakur	Rs. 2500
Psychology of Dream ISBN: 978-81-8220-824-7	Prof. Dr. Sigmund Fred	Rs. 400
Socialisation of Psychopathological Disorder ISBN: 978-81-8220-797-4	Katherine Marsland and Ruth Baer	Rs. 5000
Aristotelian Psychology ISBN: 978-81-8220-762-2	J.S. Bill	Rs. 990
Behavioral Transformation in Applied Psychology ISBN: 978-81-8220-658-8	G. Venkatesh Kumar & NovRattan Sharma	Rs. 1500
Experiential Applied Psychology ISBN: 978-81-8220-708-0	G. Venkatesh Kumar & NovRattan Sharma	Rs. 1500
Recent Trends in Human Stress Management 978-81-8220-686-1	Ed. Akbar Husain and Md. Ilyas Khan	Rs. 1350
Health Psychology 978-81-8220-692-2	Edited by Rajbir Singh, Amrita Yadava and Nov Rattan Sharma	Rs. 1400
HIV/AIDs in India: A Public Health Approach in Contemporary Trends 978-81-8220-688-5	Sibnath Deb & Dr. Archana Shukla	Rs. 2800
Applied Spirituality: Theory, Research and Practice 978-81-8220-632-8	Akbar Husain and Sabira Khan	Rs. 1200

Basics of Guidance and Counselling ISBN: 978-81-8220-624-3	Dr. Shah Alam	Rs. 1200
Comprehensive Capsule of Psychology ISBN: 978-93-81695-28-9	Masood-ul-Hassan, T. Ahmad & Prof. Shamim A. Ansari	Rs. 495
Chastity and Modesty ISBN: 978-81-8220-611-3	K.L. Kerber	Rs. 900
Sex and Society ISBN: 978-81-8220-618-3	K.L. Kerber	Rs. 1300
Psychology of Language Learning ISBN: 978-81-8220-636-6	Wallace E. Lambert	Rs. 890
Global Encyclopaedia of the Theoretical Psychology (4 Vols. Set) ISBN: 978-81-8220-524-6 (Set)	Moazziz Ali Beg & Sangeeta Gupta Beg	Rs. 16000
Principals Leadership Behaviour of Education Colleges ISBN: 978-81-8220-511-6	Noorjehan N. Ganihar Rajeshwari G. Teggi	Rs 1200
Psychosocial Issues in Positive Health ISBN: 978-81-8220-491-1	Amrita Yadava, Deepti Hooda and NovRattan Sharma	Rs. 2200
Yoga and Meditational Psychotherapy ISBN: 978-81-8220-482-9	N.K. Singh	Rs. 900
Theory of Communication: Psycho-Social Behaviour ISBN: 978-81-8220-409-6	Dr. S.K. Mittal	Rs. 1950
Human Aggression Theory, Research and Intervention ISBN: 978-81-8220-430-0	Sunil Saini and Neelam Goyal	Rs. 1200
Positive Psychology ISBN: 978-81-8220-414-0	Ed. By Dr. Sunil Kumar Dr. S.B. Yadava	Rs. 2000
Criminal Computer Behaviour ISBN: 978-81-8220-363-1	Nina Verma	Rs 600
Organisational Behaviour: Research and Theory Based Text Book ISBN: 978-81-8220-382-2	Dr. Sunil Kumar	Rs. 1900
Mental Disorders and Treatment ISBN: 978-81-8220-357-0	Katherine Marsland	Rs 750
Theory of Perception and Perceptual ISBN: 978-81-8220-359-4	Ruth Baer	Rs. 650
Psycho-Feminism (2 Vols. Set) ISBN: 978-81-8220-392-1	K.L. Kerber	Rs. 1900
Health and Well-being: Emerging Trends ISBN: 978-81-8220-284-9	Sandhya Ojha, U. Rani Sristava and S. Joshi	Rs. 2500

Psychosocial Aspect of Health and Illness	Ed. by Dr. Sandhya Ojha and Dr. Shambhu Upadhyay	Rs. 2200
ISBN: 978-81-8220-315-0		
Explorations in Human Spirituality	Akbar Husain	Rs. 900
ISBN: 978-81-8220-316-7		
Business Psychology	Ed. by NovRattan Sharma	Rs. 999
ISBN: 978-81-8220-311-2	Amrita Yadava	
Psychology and Health Promotion	Ed. by Radhey Shyam and Dr. S.R. Khan	Rs. 790
ISBN: 978-81-8220-299-3		
Perception of the Elderly	Swaha Bhattacharya & Monimala Mukherjee	Rs. 750
ISBN: 978-81-8220-203-3		
Buddhist and Western Psychology: Comparative Study	V. Nithiyanandam	Rs. 540
ISBN: 978-81-8220-293-0		
Psychology of Education	Nov Rattan Sharma,	Rs. 840
ISBN: 978-81-8220-212-2	Ashok K. Kalia & Amrita Yadava	
Environmental Psychology	Swaha Bhattacharya	Rs. 850
ISBN: 978-81-8220-202-3		
Counselling: Theory, Research and Practice	Nov Rattan Sharma,	Rs. 850
ISBN: 978-81-8220-211-5	Ashok K. Kalia & Akbar Husain	
Psychoneuroimmunology: A Behavioural Approach	Rajbir Singh, Radhey Shyam & Shyodan Singh	Rs. 750
ISBN: 81-8220-262-0		
Psychology of Sports Performance	Shyodan Singh	Rs. 960
ISBN: 81-8220-279-5		
Fear of Death and the Bhagavad Gita: <i>H.C. Ganguli</i>		Rs. 600
Psycho-philosophic Study		
81-8220-260-4		
Investigation of Crime Scene	<i>Robert Allison</i>	Rs. 620
81-8220-248-5		
Positive Health Psychology	<i>Edt. by Amrita Yadava & Nov Rattan Sharma</i>	Rs. 950
81-8220-195-0		
Psychology of Wellbeing	<i>Edited by Rajbir Singh & Radhey Shyam</i>	Rs. 2000
81-8220-196-9		
Personality Development:	<i>M.U. Ahmad</i>	Rs. 600
<i>Psycho-social Measurement</i>		
81-8220-225-6		
Foucault's Analysis of Mental Illness: <i>Anjana Banerjee</i>		Rs. 540
A Psycho-pathological Study		
81-8220-226-4		



Text Book of Psychology and BEHAVIOURAL SCIENCE

Dr. Vidya Bhagat

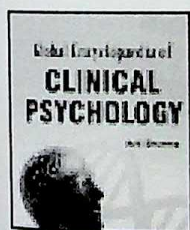
1st Edition, 2018

ISBN: 978-81-8220-942-8

Rs. 950, Size 14×21 Cm, Pages 248

This book provides basic knowledge of psychology and behavioural science and serves as a text book for Psychology and Behavioural Science for undergraduate students. The book extends its scope for conceptualizing basic psychological aspects. It is an introductory book of psychology and behavioural science for the beginners. It introduces the various aspects of general developmental and abnormal aspects of psychology. The areas of behavioural science are also illuminated in the book. Thus the undergraduate students can attain the basic knowledge in the field.

Dr Vidya Bhagat is currently a professor of clinical psychology at the Univesiti Sultan Zainal Abidin Kuala Terengganu, Malaysia. Having Mastered in Applied Clinical Psychology from the Mumbai University...



Global Encyclopaedia of CLINICAL PSYCHOLOGY

Arti Sharma

Second Edition, 2018

ISBN: 978-81-8220-983-1

Rs. 2500, Size 19×24 Cm, Pages 318

The revised edition of *Global Encyclopaedia of Clinical Psychology* explains the boundaries between what is normal and abnormal among different cultures. It looks at the symptoms of mental illness of individual and organisation. The Encyclopaedia captures a sense of clinical psychology as a dynamic and changing field which has grown up fast along-side other more established professions involved in mental health care and which is continuing to evolve in response to contemporary needs.

Arti Sharma, is a young scholar and senior research fellow, Department of Psychology, Patna University, Patna. She has written a number of research papers published in journals of national and international repute.



EXPLORATIONS IN HUMAN SPIRITUALITY

Ed. by Akbar Husain

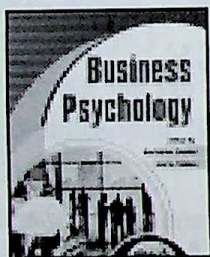
Second Edition, 2018

ISBN: 978-81-8220-979-4

Rs. 1300, Size 14×21 Cm, Pages 420

Spirituality is no longer the exclusive domain of Sages, Saints, Prophets, Rishis and Munis, and Sufis. Spirituality is an important aspect of humanity. In this edition my mission is presenting multiple theoretical orientations, researches and information on the spiritual practices and rituals to encourage behavioural scientists to do research and practice and try to formulate their own views. Acknowledging that spirituality is a part of change at large in society, we invite people to explore and experience creatively and practically about the issues and challenges raised in the chapters of this edition.

Akbar Husain obtained his B.A. (Hons.), M.A., M.Phil, Ph.D degrees in psychology from Aligarh Muslim University, Aligarh, India. He has been member of the Department of Psychology at the Aligarh Muslim University since 1980.



BUSINESS PSYCHOLOGY

Ed. by. NOvRattan Sharma &

Amrita Yadava

Second Edition, 2018

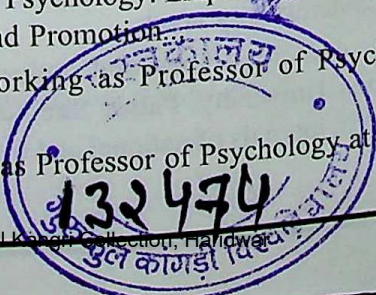
ISBN: 978-81-8220-946-6

Rs. 1600, Size 14×21 Cm, Pages 496

Business Psychology, comparatively a new title, is embodiment of the concepts and issues relating to individual, team work and leadership, interpersonal relations structure and functions of small or large national and multinational companies /organisations and integration of all these with the objective to create opportunities beyond boundaries. The new edition consists of 21 chapters classified over three parts namely (i) Business Psychology: Emerging Issues; (ii) Business Psychology: Empirical Studies; and (iii) Business Psychology: Enhancement and Promotion.

Nov Rattan Sharma is working as Professor of Psychology at M.D. University, Rohtak.

Amrita Yadava is presently as Professor of Psychology at M.D. University, Rohtak.



ets, Rishi
ty. In this
researcher
behaviour
own view
we invi
the issue

ent of the
leadership
national
se with the
on consid
psycholog
(ii) Busine
y at M
Univers

